



**TEACHER RETIREMENT SYSTEM OF TEXAS MEETING
BOARD OF TRUSTEES
AND
INVESTMENT MANAGEMENT COMMITTEE**

(Mr. Barth, Committee Chair; Mr. Colonna; Mr. Kelly; Mr. McDonald; & Ms. Sissney, Committee Members)

AGENDA

June 7, 2012

TRS East Building – Boardroom

1. Consider the approval of the proposed minutes of the April 19, 2012 committee meeting – Todd Barth
2. Receive a Review of External Private Markets Portfolio – Steve LeBlanc, Rich Hall, and Eric Lang

NOTE: The Board of Trustees (Board) of the Teacher Retirement System of Texas will not consider or act upon any item before the Investment Management Committee (Committee) at this meeting of the Committee. This meeting is not a regular meeting of the Board. However, because a quorum of the Board may attend the Committee meeting, the meeting of the Committee is also being posted as a meeting of the Board out of an abundance of caution.

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Tab 1

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Minutes of the Investment Management Committee

April 19, 2012

The Investment Management Committee of the Board of Trustees of the Teacher Retirement System of Texas met on April 19, 2012, in Room E345 located on the Third Floor of the TRS East Building offices at 1000 Red River Street, Austin, Texas. The following committee members were present:

Todd Barth, Chair
David Kelly
Eric McDonald
Nanette Sissney

A quorum of the committee was present. Others present:

Charlotte Clifton, TRS Trustee	Chi Chai, TRS
Karen Charleston, TRS Trustee	Dale West, TRS
Anita Palmer, TRS Trustee	Sylvia Bell, TRS
Chris Moss, TRS Trustee	David DeStefano, TRS
Brian Guthrie, TRS	Mohan Balachandran, TRS
Britt Harris, TRS	Janis Hydak, TRS
Ken Welch, TRS	Patricia Cantú, TRS
Jerry Albright, TRS	Curt Rogers, TRS
Shayne McGuire, TRS	Sharon Toalson, TRS
Bernie Bozzelli, TRS	Mary Chang, TRS
Eric Lang, TRS	Dennis Gold, TRS
Jase Auby, TRS	Angela Vogeli, TRS
Dr. Keith Brown, Investment Advisor	Dan Junell, TRS
Steve Huff, Fiduciary Counsel	Denise Lopez, TRS
Steve Voss, Hewitt EnnisKnupp	Lynn Lau, TRS
John Claisse, Albourne	Jaime Llano, TRS
Ted Melina Raab, Texas AFT	Demetrius Pope, TRS
Leroy DeHaven, TRS Retiree	Scot Leith, TRS
Ann Fickel, Texas Classroom Teachers Association	Steve Peterson, TRS
Craig teDuits, State Street	Jared Morris, TRS
Josh Sanderson, Association of Texas Professional Educators	Scott Moore, TRS
Herman Martina	Komson Silapachai, TRS
	Pat Barker, TRS

Mr. Barth called the meeting to order at 11:32 a.m.

1. Consider the approval of the proposed minutes of the December 8, 2011 committee meeting

On a motion by Mr. Kelly, seconded by Ms. Sissney, the committee approved the minutes of the December 8, 2011 meeting as presented.

2. Receive an Internal Management annual review of 2011 – Chi Kit Chai, Janis Hydak, Shayne McGuire, David DeStefano, Bernie Bozzelli, and Mohan Balachandran.

Mr. Chai provided an overview of the Internal Management team, which comprises three functional areas: Internal Active Management, Internal Passive Management, and Trading. He stated that the team manages \$44 billion, or 42 percent of the trust, in which \$19 billion is managed actively and \$25 billion passively. He said that the active portfolios are used to generate returns in excess of the benchmark's returns and the passive portfolios are used to track benchmark returns efficiently. He stated that active management assets, which include the Global Best Idea (GBI) Flagship and GBI Gold, had outperformed its benchmark each year and added 0.6 percent of alpha on average per year with a 0.5 percent return target. He reported that the GBI Gold had realized 1.5 percent alpha on average per year. He stated that passive management assets include long-term Treasury bonds, TIPS, REITs, a hedge fund replication portfolio, and global equity. Mr. Chai presented the organization of the Internal Public Markets (IPM) team and the IPM committee.

Presenting the internal active strategies, Mr. Chai stated that the design of the GBI portfolios is based on a lower-cost, lower-turnover and lower-tracking error global strategy. He stated that the GBI Flagship tracking error tolerance is up to 2 percent, which complements the external manager program, with a tracking error between 3 and 6 percent. He explained that the level of tracking error is neither good nor bad, but simply represents different levels of active risk, and that the ultimate goal is to maximize return at a given tracking error level. Responding to a question from Mr. Kelly regarding the rationale for the lower-turnover strategy, Mr. Chai stated that the fund emphasizes valuation, which changes more gradually, and that the goal is to perform consistently well over a long-term horizon.

Presenting the performance of the GBI portfolios, Mr. Chai stated that the GBI Flagship had outperformed its benchmark during the past four consecutive years and added 211 basis points of alpha since inception in December 2007. He stated that the portfolio had also outperformed its peers by 83 basis points on an annualized basis at a tracking error of 1.5 percent and an information ratio of 0.4. He reported that the GBI Gold Portfolio had outperformed its benchmark in the past two consecutive years and generated returns of 400 basis points since inception in October 2009 and 152 basis points on an annualized basis at a tracking error of 2.2 percent and an information ratio of 0.7. Responding to a question from Mr. Kelly regarding the dollar amount of 152 basis points annualized return from gold, Mr. Chai stated that it is about \$12 million. He confirmed for Mr. Kelly that the GBI portfolios had generated about \$0.5 billion of return since inception.

Ms. Hydak presented the global equity market returns in 2006 through 2011 and on an annualized basis in the three-year and five-year periods. She noted that the U.S. market was the only region in 2011 with a positive return (1%) while the European market was down 11 percent, EMEA and Latin America were down 20 percent, and Asia Ex-Japan (excluding Japan) was down 17 percent. She noted that the strong growth of emerging markets in 2011 did not translate into equity appreciation and that emerging markets equities underperformed developed market equities. Responding to a question from Mr. Kelly, Ms. Hydak stated that if it were reported in local currency terms, returns from Europe would look better.

Ms. Hydak presented the global sector returns in 2006 through 2011 and on an annualized basis in the three-year and five-year periods. She reported that top performing sectors in 2011 were health care (9%), consumer staples (8%), and telecommunication (0%). Bottom performers, she said, were materials (-21%), financials (-19%), and industrials (-10%). She noted that the top three performers in the first quarter of 2012 were technology, financials, and consumer discretionary.

Ms. Hydak reported on the performance of global equity fund managers that are comparable to TRS' size and use either the MSCI All-Country World or FTSE All-World global benchmarks. She reported that only 29 percent of the funds outperformed their benchmarks in 2011. She stated that record-high levels of stock correlations were a headwind for active equity managers. She noted that stock correlations reached a peak in September 2011. Despite the market crises in the past decade, she said, the GBI had outperformed each year since inception in December 2007. She also noted that the largest monthly drop in stock correlations since 1987 stretched from December 2011 through January 2012. She stated that macro risk and crises as well as the shift from active management to passive management contributed to the longer-term trend of stock correlations.

Presenting the proliferation of exchange-traded funds (ETFs), Ms. Hydak stated that ETFs are passive funds, which provide exposure to a given market. An ETF, she explained, can give the portfolio exposure to a broad-based index like the S&P 500 or to more specific sectors like financials, energy or gold. She stated that ETFs constitute 25 to 40 percent of total equity trading volume. Responding to a question from Mr. Barth, Ms. Hydak stated that ETFs are growing because of their popularity for managing portfolio transitions, allocations, risks, and institutional trading. ETF growth also contributed to increasing stock correlations.

Ms. Hydak explained the factors contributing to the variation in performance among US stocks, including company-specific factors, quality, style and size.

Mr. DeStefano provided an overview of the GBI Flagship Portfolio. He stated that the sources of its outperformance are regional allocation, sector allocation, and stock selection. He noted that the difficult market environment for stocks in 2011 caused some underperformance in security selection, which was made up through sector and regional allocation driven by the underweight in Japan, Europe and financial sectors, and the overweight in health care.

Mr. DeStefano presented the GBI investment process. He stated that the process combines top-down allocation with bottom-up security selection and incorporates quantitative screening, fundamental analysis, and portfolio optimization. He provided a detailed explanation of the top-down allocation and bottom-up security selection processes.

Mr. DeStefano highlighted that, if it were a mutual fund, TRS would have been the fourth largest global active equity mutual fund in the world as of December 31, 2011.

Presenting the GBI Flagship as of December 31, 2011, Mr. DeStefano stated that the portfolio overweighted the Asia Ex-Japan, EMEA, and Latin American markets and underweighted Japan and Europe; and it overweighted health care and energy and underweighted consumer discretionary and consumer staples. He also presented the top ten holdings and the stocks with the largest overweight and underweight. Responding to a question from Mr. Kelly

regarding the overweight in China Construction Bank Corp., Mr. Chai shared his projections on the Chinese markets. Responding to Mr. Barth's concern about the accuracy of the data from China, Mr. Chai shared the concern but noted that the data provide the general direction of the market growth in a relative term from time to time and through the industrial production and consumption data.

Mr. DeStefano presented the GBI Flagship characteristics relative to the MSCI benchmark. He stated that the portfolio tilts toward large cap companies because of the fund's large size and liquidity requirements. He stated that the valuation is lower than the benchmark on a price-to-earnings basis with a higher dividend yield and quality. Per Mr. Kelly's request for the benefit of the new trustees, Mr. Chai and Mr. DeStefano defined tracking error and explained its application.

Mr. McGuire presented IPM's cross-division collaboration efforts, including assisting other teams with valuation and global industry analysis, participating in investment task forces, hosting investment symposia, and developing tactical equity-oriented portfolios, such as the gold fund and the high quality portfolio. He noted that the rest of the IMD also provides tremendous help to IPM. He mentioned that the External Public Markets team led by Dale West had helped IPM contact some of the top global investment funds.

Mr. McGuire presented IPM's accomplishments in 2011 and the priorities for 2012. He noted the launching of the high quality R&D portfolio in 2011. He stated that IMD participated in a renewal project to examine all the investment ideas that could potentially add substantial value to the trust over the intermediate term. He said that high quality was identified as an attractive opportunity. He stated that the performance of the portfolio had been in line with expectations. He stated that IPM's goal was to collaborate with the Tactical Asset Allocation team to arrive at the ideal regional and sector exposure for the GBI portfolio. Responding to a question from Mr. Barth as to how the team benefited from working with the strategic partners, Mr. Chai stated that the strategic partners had strong models for evaluating different asset classes and differentiating regions such as emerging markets versus U.S. markets. He said that staff reviewed and asked about their models to learn more about their allocation positions.

Mr. Bozzelli provided an overview of the internal passive management function. He stated that the team manages about \$25 billion, or 24 percent of the trust, which mainly comprises U.S. Treasury bonds and TIPS. He stated that the purpose of the portfolios is to aid the trust in rebalancing those portfolios to the Trust Strategic Asset Allocation and identify the appropriate investment vehicle that provides the closest benchmark index tracking at the lowest cost. He introduced the passive management team members. Mr. Bozzelli also presented the portfolio composition and briefly explained ETFs and swaps included in the portfolio.

Mr. Balachandran provided an overview of the hedge fund replication strategy. He recapped that the policy allocation to hedge funds had increased from 4 percent to 9 percent on October 1, 2011. He stated that the current market value of the portfolio was about \$2.5 billion and that the goal is to minimize the tracking error to the directional hedge fund benchmark. He responded to Mr. Barth that the immediate goal is to build it out by the end of 2012 and the long-term goal is to keep about 0.5 percent of the portfolio in the strategy. He explained how the replication process is based in part on collaboration with researchers at AQR and Credit Suisse. He briefly profiled AQR and Credit Suisse. He said that TRS is invested in AQR's hedge and

long-only funds. He said that Credit Suisse is one of TRS' premier trading partners and a pioneer in the hedge fund replication field. He stated that staff learned from those firms that a good portion of the hedge fund returns was due to market exposure and the goal of the replication strategy is to measure and replicate that exposure.

Presenting the replication ITD performance, Mr. Balachandran reported a good start in the first three months since inception in October 2011. He stated that the portfolio was built from the bottom as staff started buying equities when the market was at the bottom, which added value to the portfolio. He stated that the portfolio had tracked the benchmark closely since inception and was up about 7 percent in March 2012. Referring to the replication ITD performance chart, Mr. McDonald asked what the difference is between "replication" and "replication (dollar-weighted)." Mr. Balachandran stated that dollar-weighted replication shows performance on the basis of the whole trust, whereas replication shows the actual performance of the account. He also presented the exposures of the replication strategy to various asset classes at any point. He noted that the exposures include long- and short-capitalization stocks. He stated that the goal is to capture the small cap and emerging markets risk premiums. Based on the model tracing the hedge fund performance from January 2006 through October 2011, Mr. Balachandran said that the current replication strategy correlated with the index and captured it correctly. Responding to a question from Mr. McDonald as to why the replication strategy exceeded the benchmark starting from 2008, Mr. Balachandran explained that as the market fell starting in 2008, the hedge funds decreased their financial leverage rapidly; when the market went up again in 2009, the hedge funds were still deleveraged, which caused the deviation between the strategy and the benchmark. Mr. Kelly noted that TRS fund has a better capital structure than most other funds because of its size and liquidity and does not need to deleverage, which also explains the gap between the replication strategy and the benchmark in 2008 and after. He noted that staff had taken advantage of that in the past by investing in dislocated credit fund in 2007. Mr. Balachandran stated that a typical hedge fund comprises the market risk premium, the hedge fund risk premium, returns and fees, and that the current replication does not include fees as it is managed internally. He stated that the goal is to reach the hedge fund premium by replicating the benchmark with an approach that AQR employs in their hedge fund replication process. To conclude, Mr. Balachandran stated that passive portfolios are about steady performance with low cost and low tracking error and the goal is to ensure that the trust stays close to its strategic asset allocation. He stated that the portfolio also compliments other internal portfolios.

Mr. Bozzelli provided an overview of the Trade Management Group (TMG). He stated that TMG's primary responsibility is executing trades, including equity, fixed income, foreign exchange and futures. He stated that the goal is to implement those investment decisions in an effective and efficient manner by reducing and controlling trading costs and market impact. He noted that the TMG also serves as an advisory to the IMD. He explained how the team interacts with the rest of the IMD and its portfolio strategy and execution.

Presenting the major initiatives in the past one year since April 2011, Mr. Bozzelli highlighted the TMG's shift from total-return swaps to futures and forwards, which resulted in an increase in trading volume. He stated that the transition was intended to decrease counterparty risk, increase transparency and lower trading costs. He also highlighted the change in the trading network. Mr. Peterson further explained the new trading partner network and profiled each category of brokers. He also explained the broker selection and monitoring processes and

highlighted the transaction cost analysis (TCA), which is used to measure and evaluate brokers' performance.

Presenting the TMG's performance, Mr. Peterson stated that trading performance is measured by an independent third party trading-specific benchmark and then the peer universe. He reported that the team had consistently outperformed the peers in each of the past four years and placed in the first quartile in three of those years. He stated that TCA is also used to measure the performance of the trading desk and the traders but is limited to equities. He stated that staff was currently working with the TCA providers to develop ways to measure the execution quality of other asset classes such as fixed income and futures.

Mr. Llano discussed the trading volume by broker category and product as of December 31, 2011. He stated that foreign exchange has increased from \$5.4 million to \$46 million and futures trading has increased from \$5.3 million to \$142 million. He noted that both futures and forwards are limited-life instruments, which expire on a monthly or quarterly basis. To maintain the same exposure, he said, a trade must be executed to roll that exposure forward. He stated that more than half of the trading volume had been related to rolls. As a result, he explained, even if the volume increases, the trust turnover stays the same. Mr. Llano further explained how the shift from swaps to futures would lower counterparty risk while increasing flexibility, transparency, control and oversight. He stated that futures are widely used among the peers on the Futures Clearing Merchant (FCM) and Bloomberg Execution Management System (EMS). He noted that TRS' current process only allows traders to trade the orders that were entering the system and does not allow them to overbuy or execute the wrong security, a process which eliminates errors. Mr. Llano briefly presented the internal and external systems and technology TMG uses.

In conclusion, Mr. Bozzelli laid out the priorities going forward: building expertise and products across different asset classes, establishing best practices for each asset class and product and developing the electronic trading capabilities. He invited board members to visit the trading center. Responding to a question from Mr. McDonald as to whether the transition to futures would cause the negative roll yield that counterparties once carried in the swap world, Mr. Bozzelli stated that the futures roll-over process can work to the fund's advantage when front month futures are cheaper, which adds value to the fund in the roll process. Mr. Llano stated that staff communicated with the portfolio managers about when to roll. He responded to Mr. McDonald that the typical durations of the futures positions is on a quarterly basis for the U.S. markets and on a monthly basis for the European and Asian markets.

The meeting adjourned at 1:05 p.m.

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Review of External Private Markets Portfolio

Steve LeBlanc, Senior Managing Director

Rich Hall, Managing Director, Private Equity

Eric Lang, Managing Director, Real Assets

June 2012

Agenda



Accomplishments

Accomplishments

Educational
Topics

Educational Topics

Private
Equity

Private Equity

Real
Assets

Real Assets

Appendix

Appendix



External Private Markets

Accomplishments

January 1, 2008 – March 31, 2012

Steve LeBlanc
Senior Managing Director

Agenda



☐ Build a Global Framework

- Increase Allocation (PE 12%, RA 15%)
- Establish Target Global Portfolio

☐ Develop Effective and Efficient Investment Systems and Process

- The Texas Way
- 90-Day Investment Process
- Premier List

☐ Cultivate a World-Class Investment Team

- Double Staff Size
- Succession – Promote Key Players
- Future – Develop Young Talent

☐ Construct Portfolio through Attractive Investments

- Portfolio Composition
- Focused Areas
 - Principal Investments
 - Strategic Partners
 - Energy
 - Emerging Manager Program

☐ Awards and Milestones

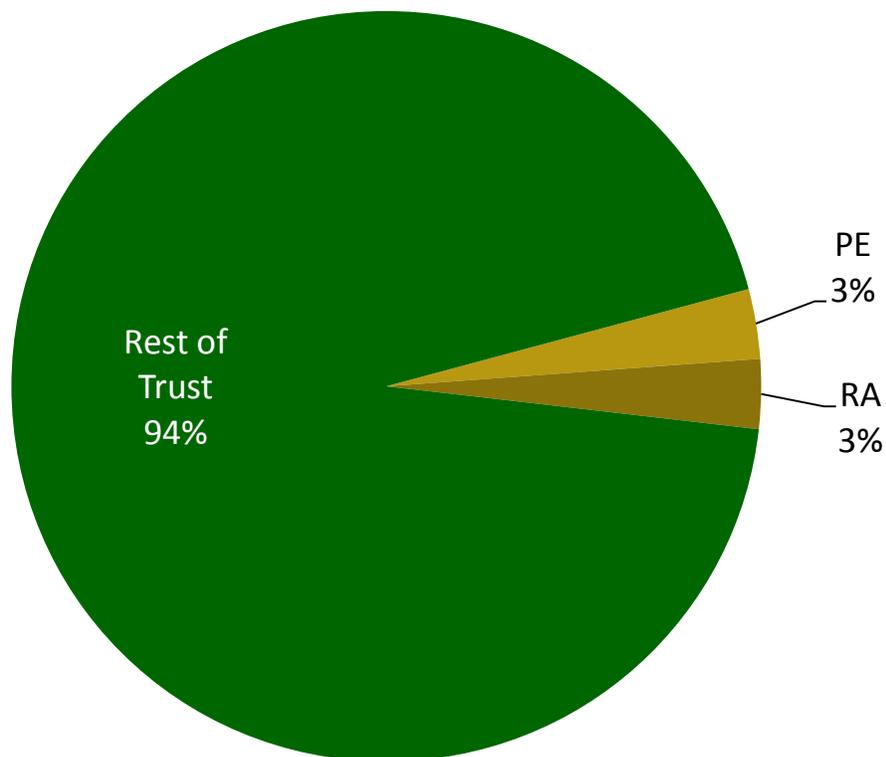


Global Portfolio Framework

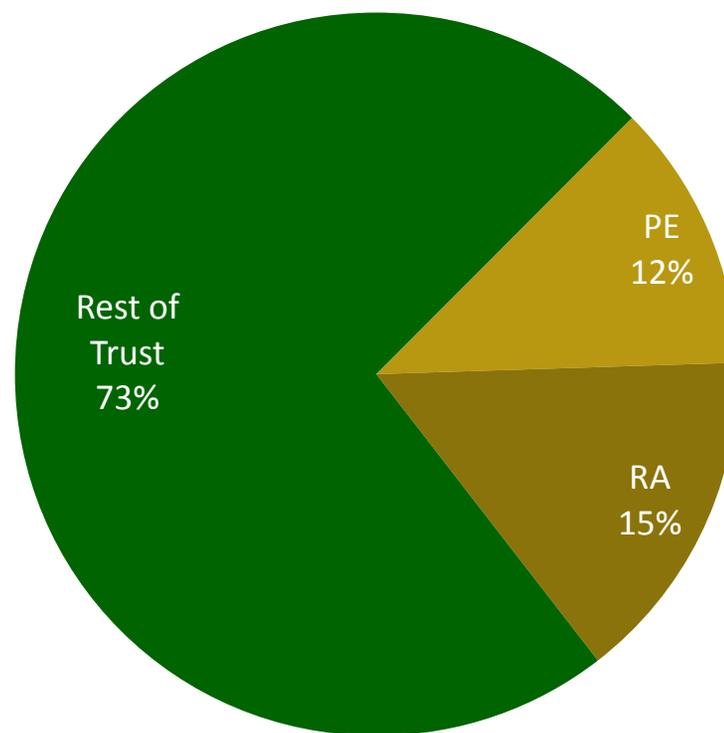
Increased Allocation



Pre-2007 Target Allocation



2012 Target Allocation

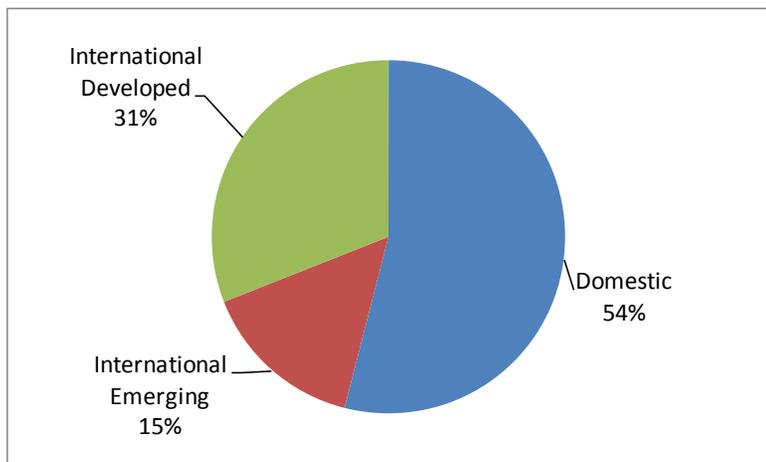


Target Global Portfolio

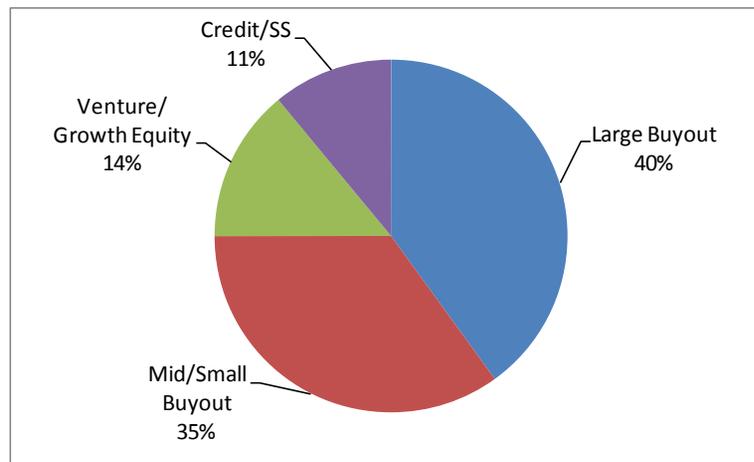


PRIVATE EQUITY

Geographic Target Allocations

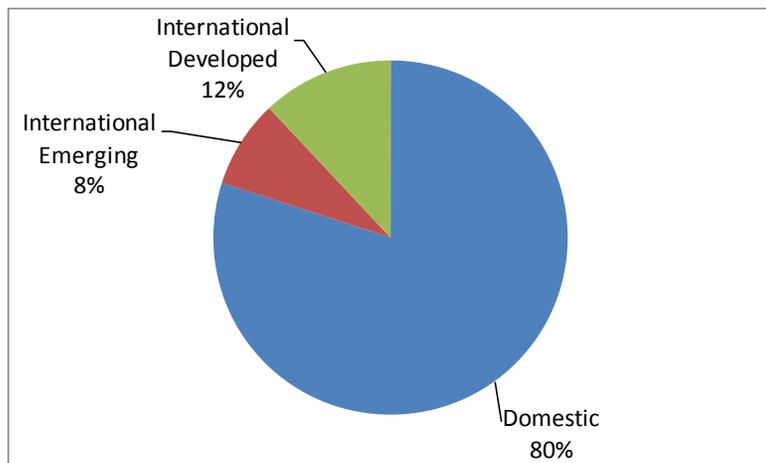


Strategy Target Allocations

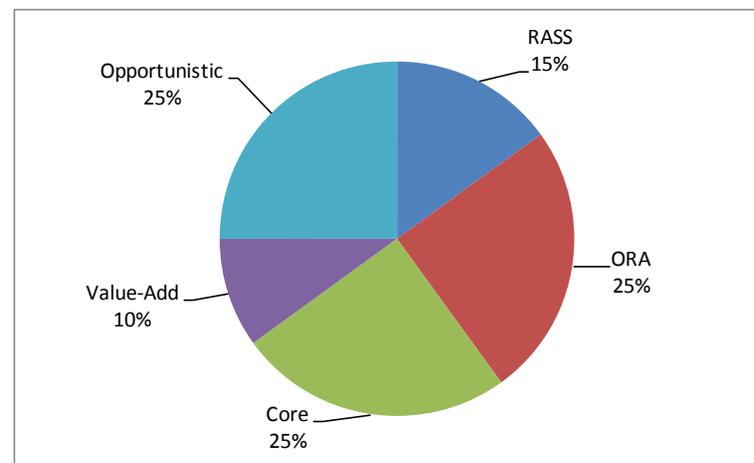


REAL ASSETS

Geographic Target Allocations



Strategy Target Allocations



Portfolio Composition

As of December 31, 2007



Private Equity

Asset Value

NAV	\$4.8 Billion
<u>Unfunded Commitments</u>	<u>\$6.8 Billion</u>
Exposure	\$11.6 Billion
NAV % of Trust	4.2%
Long-Term Target	10.0%

Relationships

General Partners	48
Individual Funds	90
Average Commitment in Vintage Year 2007	\$278 Million
Target General Partners	60

Real Assets

Asset Value

NAV	\$1.9 Billion
<u>Unfunded Commitments</u>	<u>\$3.8 Billion</u>
Exposure	\$5.7 Billion
NAV % of Trust	1.7%
Long-Term Target	15.0%

Relationships

General Partners	26
Individual Funds	39
Average Commitment in Vintage Year 2007	\$153 Million
Target General Partners	90

Portfolio Composition

As of March 31, 2012



Private Equity

Asset Value

NAV	\$12.7 Billion
<u>Unfunded Commitments</u>	<u>\$7.2 Billion</u>
Exposure	\$19.9 Billion
NAV % of Trust	11.5%
Long-Term Target	12.0%

Relationships

General Partners	58
Individual Funds	119
Average Commitment in Vintage Year 2011	\$119 Million
Target General Partners	30

Real Assets

Asset Value

NAV	\$14.0 Billion
<u>Unfunded Commitments</u>	<u>\$6.5 Billion</u>
Exposure	\$20.5 Billion
NAV % of Trust	12.7%
Long-Term Target	15.0%

Relationships

General Partners	59
Individual Funds	104
Average Commitment in Vintage Year 2011	\$170 Million
Target General Partners	25 - 40



Effective and Efficient Investment Systems and Process

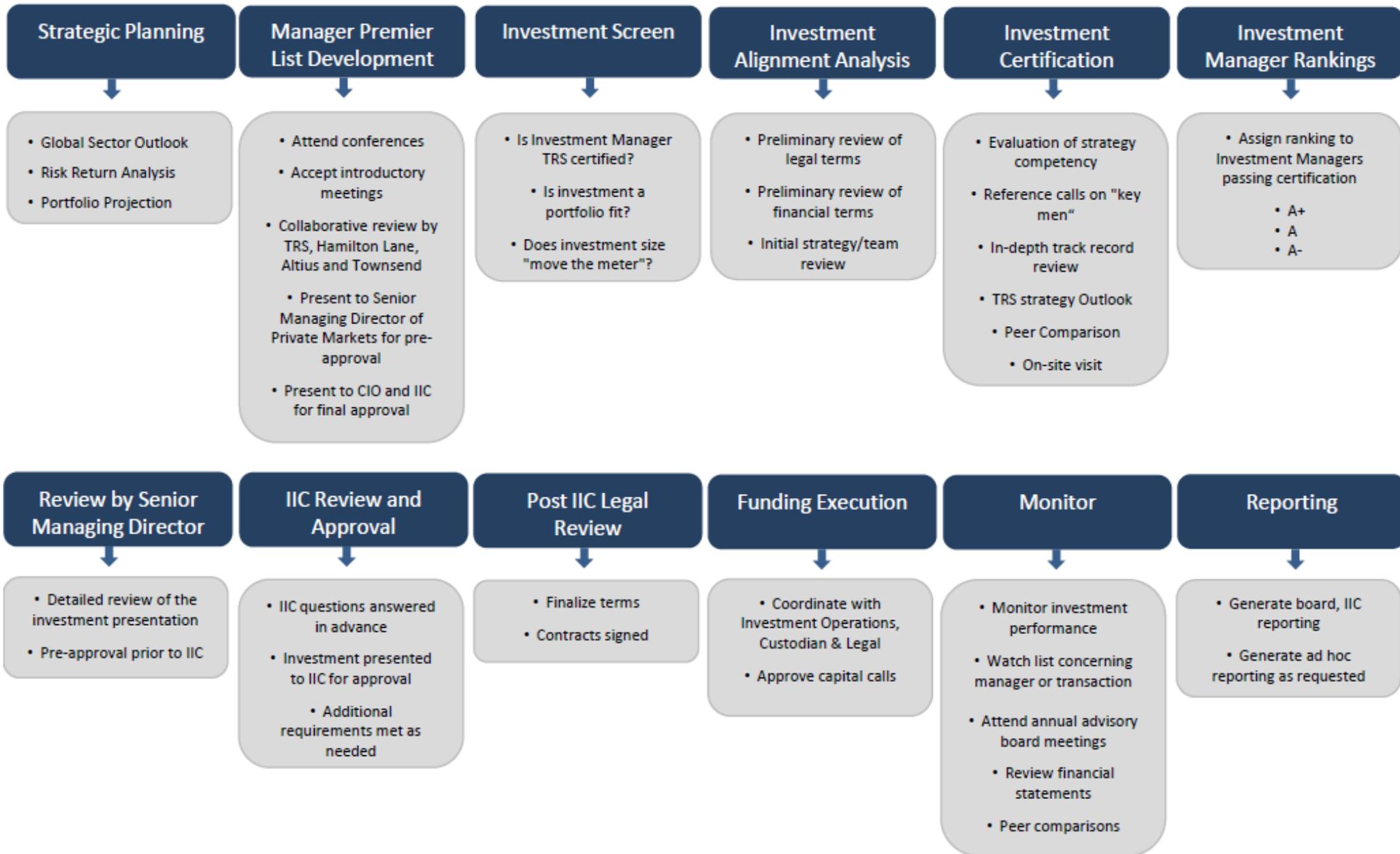
❑ Private Markets Mission

- Enhance the long-term total risk-adjusted return of the Trust
- Provide diversification to TRS's overall investment program
- Act solely in the interest of TRS beneficiaries
- Achieve returns higher than our benchmarks

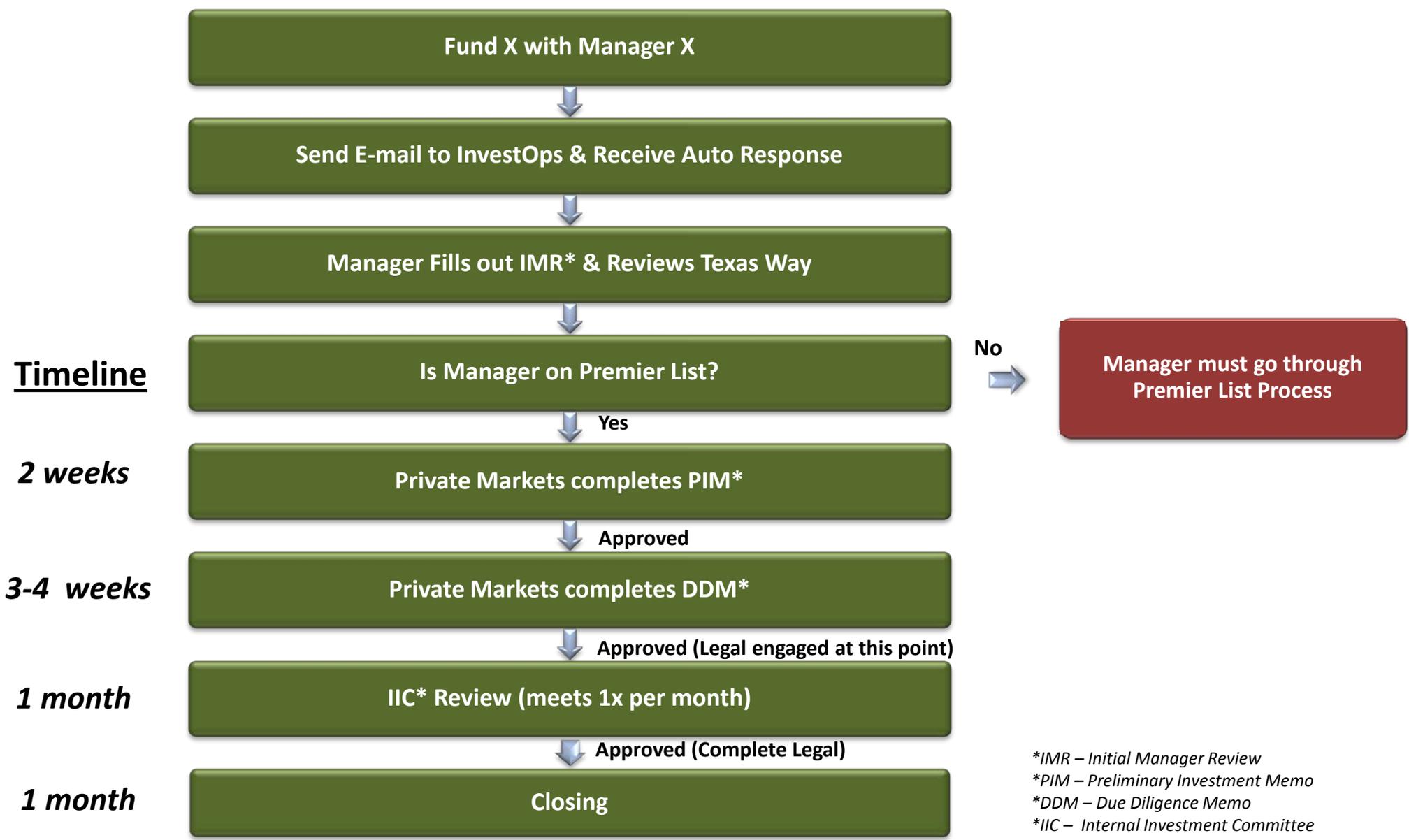
❑ Private Markets Philosophy

- Alignment of Interest and Fairness
 - TRS has a commitment to reward “alpha”
 - Focus on long-term results promotes partnership
 - Cost structure competitive with other best-in-class institutional investors
- TRS developed the Institutional Limited Partners Association (ILPA) PE Principles
- TRS established the standard Limited Partner Agreement (LPA) clauses advocated by Pension Real Estate Association (PREA)

Private Markets Investment Process



90-Day Investment Diligence

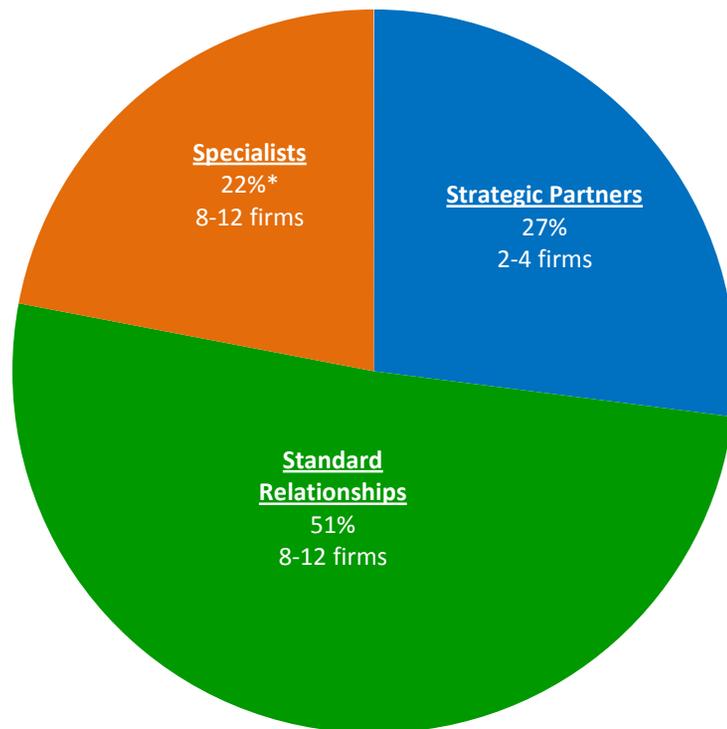


Premier List

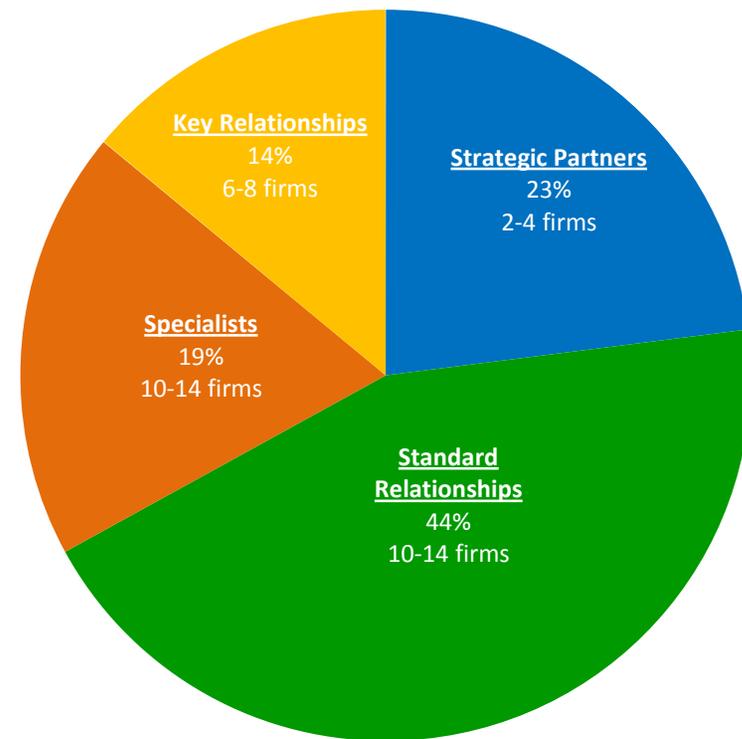
- ❑ Identify best-in-class managers who will be long-term partners for TRS
- ❑ All investments are made with a Premier List manager
- ❑ List is reviewed and modified every six months based on portfolio needs and performance

Strategy Allocation Targets and Manager Count

Private Equity by NAV



Real Assets by NAV



*% of Total numbers represent target NAV for the strategy, not target number of managers



World-Class Investment Team

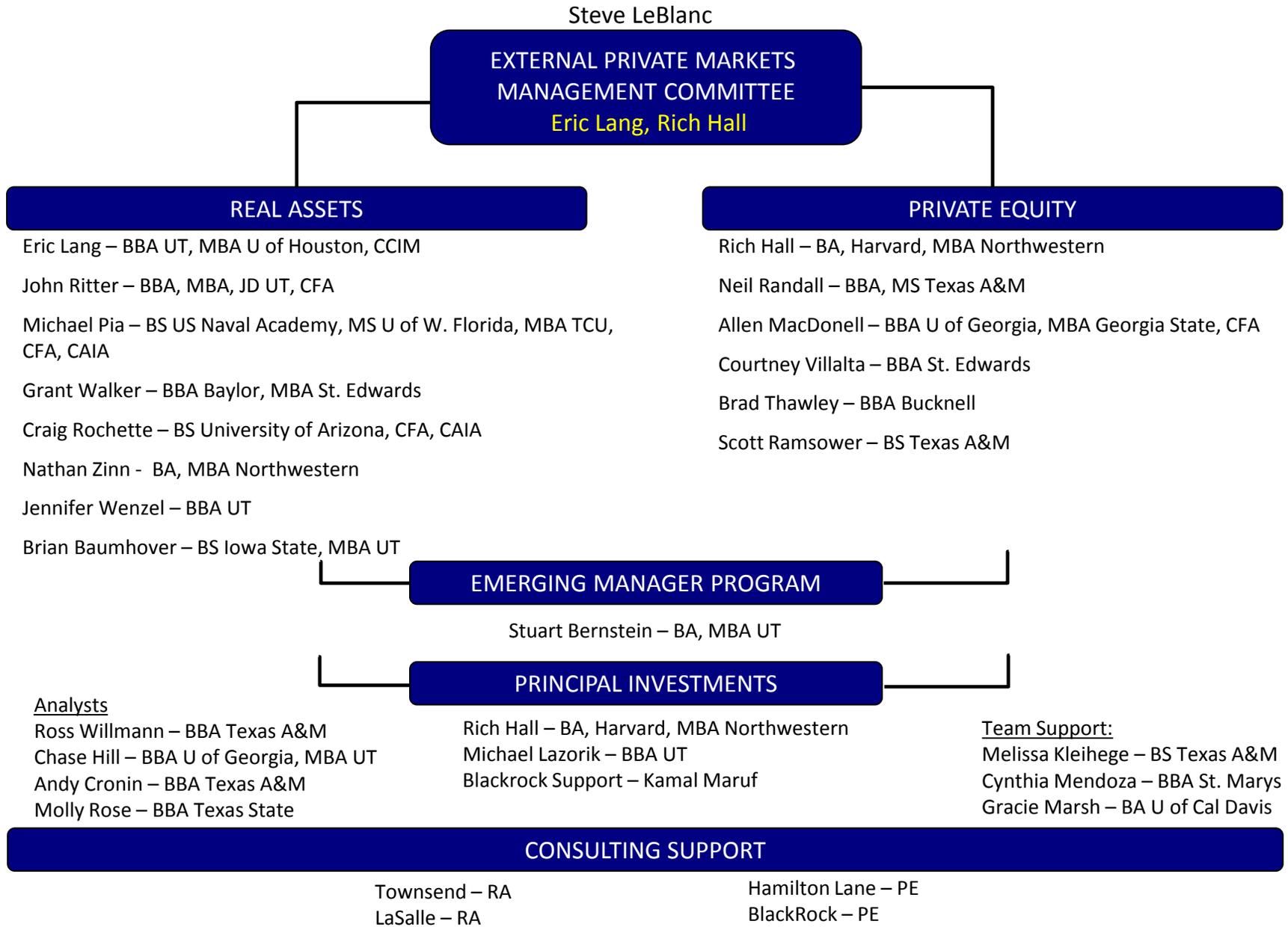


Private Markets Team

- ❑ Doubled staff to 24 professionals over 4 years
- ❑ Combined 252 years of investment experience across the team
- ❑ Numerous advanced degrees and certifications
 - 12 Master's degrees (10 MBAs)
 - 4 CFA Charterholders
 - 2 Chartered Alternative Investment Analysts (CAIA)
 - 1 JD
- ❑ 3 former members of the US Navy and US Marines
- ❑ Wide array of prior experience
 - Private investment firms
 - Public pensions
 - US military
 - Investment banking



Private Markets Organizational Chart





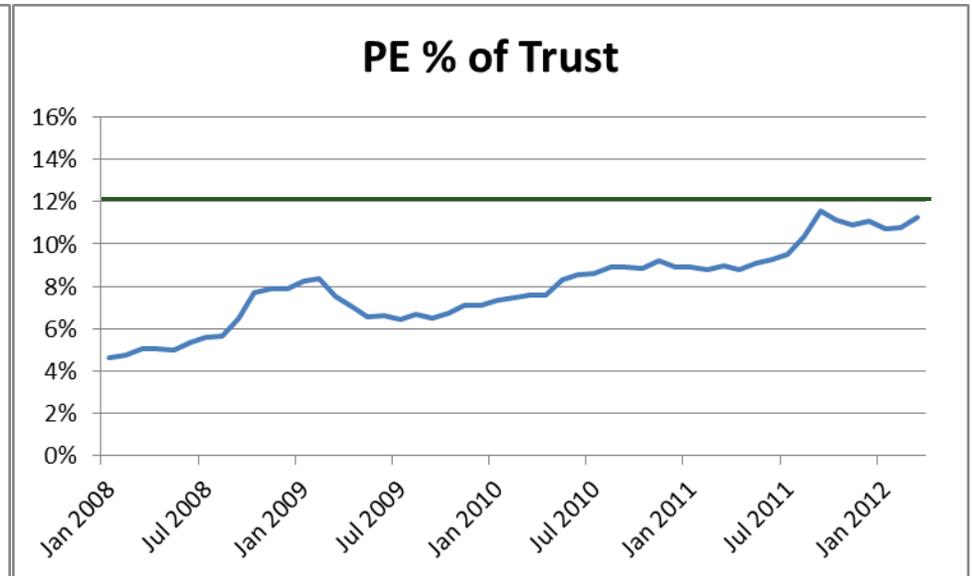
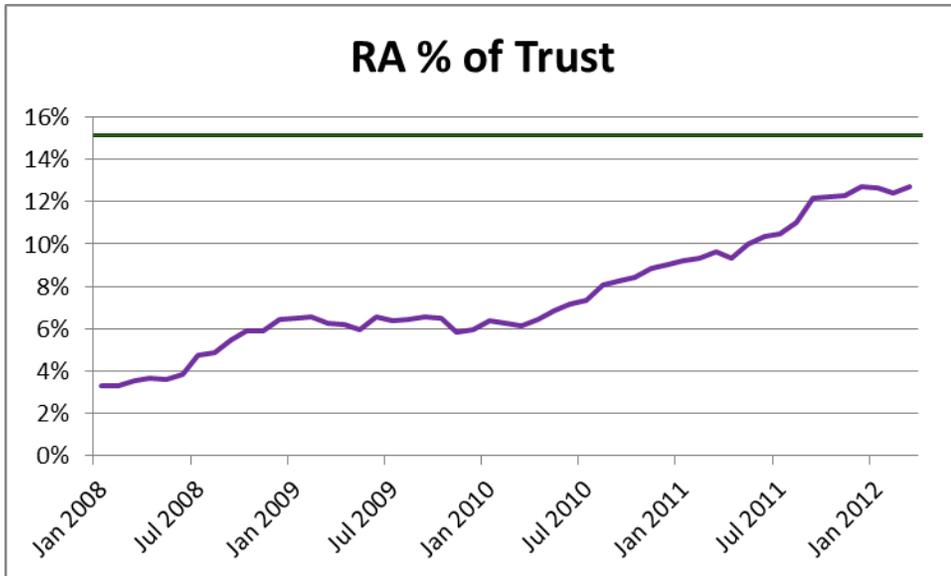
Portfolio of Attractive Investments

Portfolio Build-Out

2008 - Present



	# of Investments Approved	Capital committed (billions)	Real Assets commitments (billions)	Private Equity commitments (billions)
1/1/08 – 12/31/08	35	\$8.0	\$3.3	\$4.6
1/1/09 – 12/31/09	27	\$6.7	\$4.9	\$1.8
1/1/10 – 12/31/10	22	\$4.4	\$3.7	\$ 0.7
1/1/11 – 12/31/11	21	\$2.9	\$1.8	\$1.1
1/1/12 – 3/31/12	11	\$7.7*	\$2.1	\$5.7
<i>Total</i>	<i>116</i>	<i>\$29.7</i>	<i>\$15.8</i>	<i>\$13.9</i>



*2012 commitment amounts include \$6 billion allocation to Strategic Partners

*Trust percentages based on actual Net Asset Value



Principal Investments Program

- ❑ TRS approved Principal Investments Strategy (“PI”) in 2008
- ❑ Goal is to be 20% (\$6 - \$7 billion) of Private Markets Net Asset Value (NAV) by 2015
- ❑ Fundamental premise
 - Higher returns than Limited Partnership Fund Commitments
 - Ability to invest in more tactical opportunities
 - Gain real-time market intelligence
- ❑ Emphasis on quality over quantity
- ❑ Sourcing only from select set of TRS General Partners
- ❑ Fast-track diligence process (4-6 weeks)
- ❑ Progress since 2009
 - Private Equity: 13 Investments, \$1.6 billion committed, 9.2% SI IRR, 1.1x Multiple
 - Real Assets: 18 Investments, \$3.6 billion committed, 22.5% SI IRR, 1.3x Multiple

Private Markets SPN

Selection Criteria and Process



☐ Criteria

- Senior management commitment
- Preferred fees and terms
- Asset-management infrastructure, resources and history
- Potential to add risk-adjusted returns to entire External Private Markets
- Increased principal investment source: deal flow, size and quality
- Research capabilities

☐ Process

- Search started in the second quarter of 2010
- Evaluation and consideration of multiple firms
- Narrowed selection down to 7 firms
- Extensive selection questionnaire submitted to each firm
- Onsite visit with senior management
- Narrowed consideration to 2 firms
- Consultant review by Hamilton Lane, Hewitt Ennis Knupp and Townsend Group
- Legal meeting held August 2011
- Board Approval November 2011
- 1st SPN Summit – January 2012 (Austin)

☐ Apollo

- AUM: \$72 billion
- Opportunistic, open to investments outside of the fund mandates
- Excel in down markets and poor credit environments
- Existing Strategic Partnership with South Carolina
- Diverse capabilities with strength in distressed capital structures

☐ Kohlberg, Kravis, Roberts

- AUM: \$61 billion
- Founders of the LBO and strong senior leadership
- Good diversity, high quality orientation
- Core focus in buyout space
- Great communication and “can do” attitude

Combined result is ability to invest in all levels of the capital structure

☐ Natural Resource Story

- Long-term growth potential for oil and associated liquids
- Relative value proposition for natural gas
- High beta to inflation
- Long duration commodity exposure

☐ Investment Summary

■ Real Assets Fund Investments

- \$2.0 billion committed to 6 funds
- \$1.6 billion unfunded
- Early funds performing well, with both 2009 vintage funds over 30% IRR

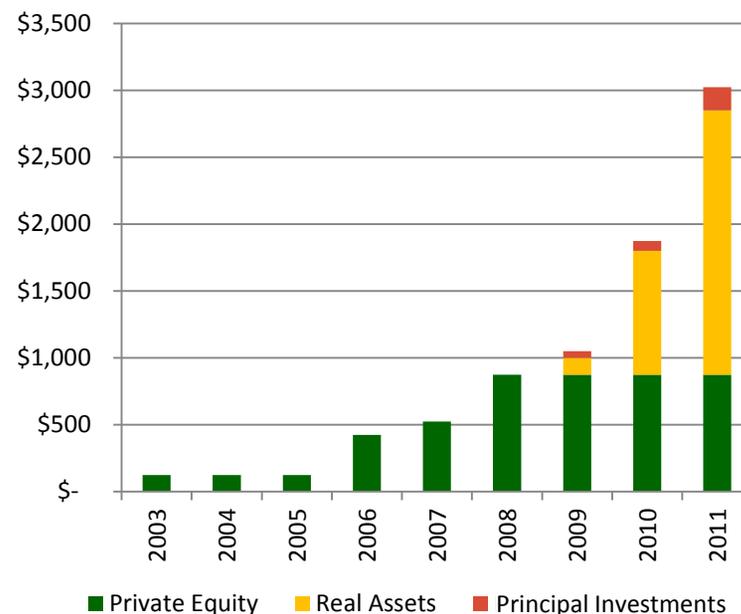
■ Private Equity Fund Investments

- \$875 million committed to 4 funds
- \$192 million unfunded
- Performance has been positive, with 2 of the 4 funds over 20% IRR

■ Principal Investments

- \$173 million committed to 3 investments
- \$129 million unfunded
- Performance has been outstanding, combining for an IRR over 56%

Growth of Private Energy Commitments
(2003-2011; \$ in millions)



Emerging Manager Program

Before and After



□ Purpose

- Identify the next top tier investment managers
- Seed portfolio to establish relationships
- Transition to a direct relationship with TRS
- Attractive investment returns

□ Before

- Limited to one asset class (PE)
- Outsourced function with no dedicated TRS staff
- Limited capital committed and no direct allocation

□ After

- Market leader in Emerging Manager space; “2009 Public Plan of the Year”
- \$1.7 billion committed
- Developed TRS Direct Program and increased funding for Credit Suisse mandate
- Designated TRS Investment Manager to run entire program (Stuart Bernstein)
- Expanded asset classes and advisors:
 - Real Estate/Real Assets - Townsend Group
 - Private Equity – Hewitt EnnisKnupp
 - Hedge Funds - Rock Creek Group
 - Long Only - Leading Edge
- To-date reviewed over 6,000 and invested in 93 emerging manager firms



Awards and Milestones



Awards and Milestones

□ 2011

- TRS Private Equity Limited Partner of the Year in North America from Private Equity International (PEI)
- Implemented Strategic Partnership Network
- Created the Texas Way
- Development of the Special Situations portfolio in Real Assets
- Developed a Five-Year and Ten-Year Plan to reflect current forecasted market conditions and address capital supply/demand imbalance
- Streamlined the Premier List
- Implemented Phase II of the Emerging Managers Program
- Created effective Principal Transactions Group
- Created energy focused investment team
- Led ILPA Principles 2.0 development and industry acceptance



Awards and Milestones (cont.)

- 2010
 - TUCS Highest One Year Return for Funds Greater Than \$10 Billion
 - North American LP of the Year in Real Estate Award from PERE
 - Nominated for North American Deal of the Year for GGP Investment by PERE
- 2009
 - Public Plan of the Year from Opal Emerging Managers Summit
 - Plan Sponsor of the Year by Alties Public Plans
 - North American LP of the Year in Real Estate Award from PERE
- 2008
 - Public Fund Investor of the Year by Institutional Investor

Private Markets Conclusion



- ❑ Private Equity and Real Assets returns exceeded 11% in 2011
- ❑ Both portfolios should be at or near target allocations by the end of 2012
- ❑ Real Assets is emerging from the J-curve with strong performance – the Real Assets portfolio is in the top 20% of TUCS peer comparison on a 3-year basis
- ❑ New capabilities developed in Principal Transactions and Energy
- ❑ Emerging Manager Program is well-established
- ❑ Continue to define and refine our relationships with Strategic Partners
- ❑ Continue to deepen and improve relationships with all partners

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Educational Topics

External Private Markets Portfolio

Richard Hall and Eric Lang
Managing Directors
June 2012

Agenda



Educational Topics

- Placement Agents
- J-Curve
- Return Methodologies for Private Markets
- Principal Investment Process
- Private Equity Policy Benchmark

Placement Agents

How do they work with TRS?



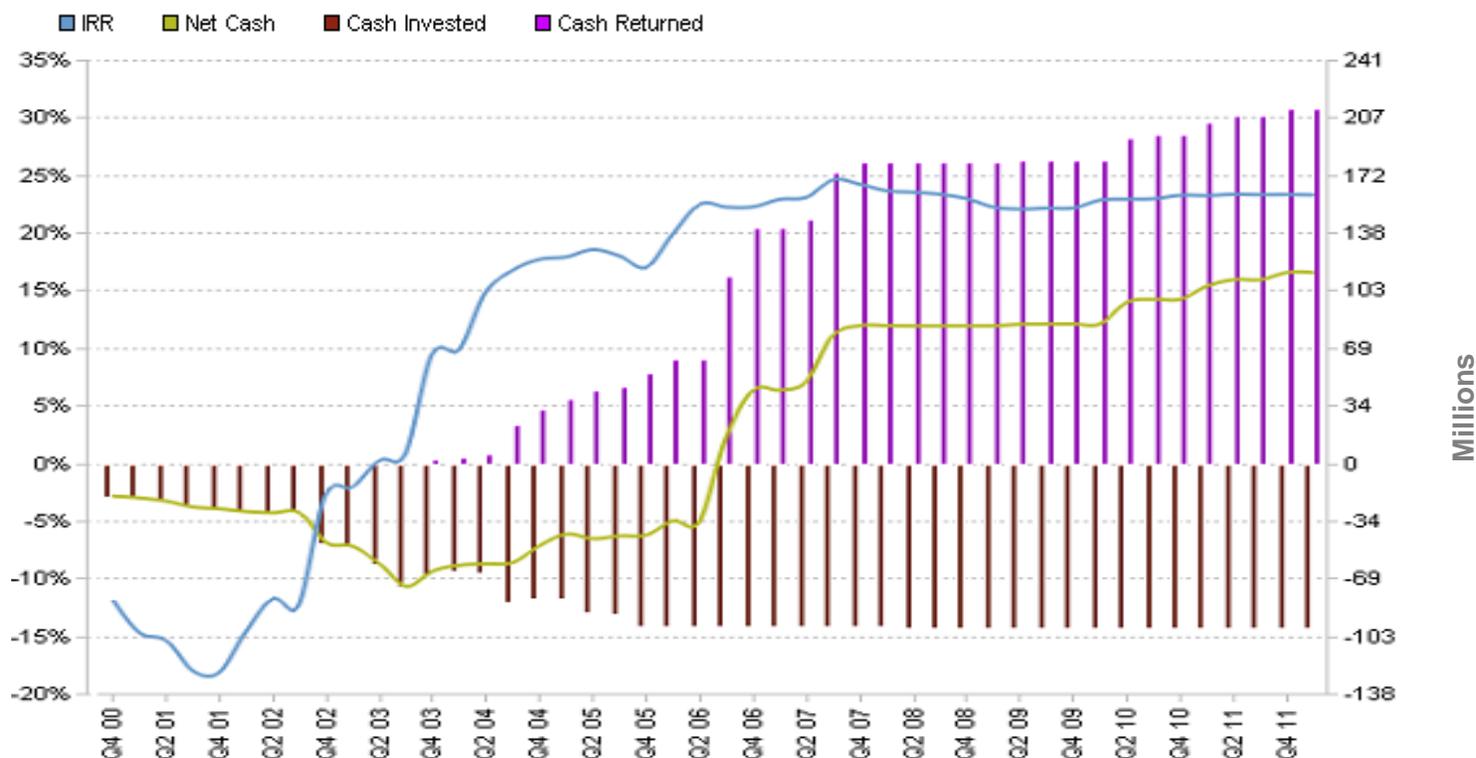
- Placement Agents: External entities hired to assist General Partners (“GPs”) during a marketing period; fee is usually contingent on amount of money raised and is paid by the GP, not by TRS
- TRS requires disclosures from funds regarding their use of placement agents and contacts with State Officials and TRS Trustees
 - Identifies firms and individuals involved
 - Discloses fee arrangements regarding potential TRS investments
- Collected first during due diligence, prior to Internal Investment Committee review
- Disclosed to the Internal Investment Committee
- Second confirmation (as part of due diligence) received from GP in TRS investment contract
- If GP makes inaccurate disclosures, TRS is provided:
 - A penalty-free withdrawal right
 - An option to receive reimbursement of management fees equal to amount of placement fees
- TRS IMD has a limited need for Placement Agents

J-Curve

Why are returns negative in early years of fund life?



- ❑ Fees and investment capital are drawn in the investment period (typically years 1-5)
- ❑ Capital is returned as investment exits are realized (typically years 3-10)
- ❑ Distributions normally commence before the whole commitment has been drawn



Performance Impacts:

Vintage Year 2000 fund example from TRS PE portfolio

- ❑ Returns are often flat or negative in the early years of a fund's life
- ❑ Portfolios with lower average age will be challenged to outperform a mature benchmark

Return Methodologies for Private Markets



Why are there different return numbers?

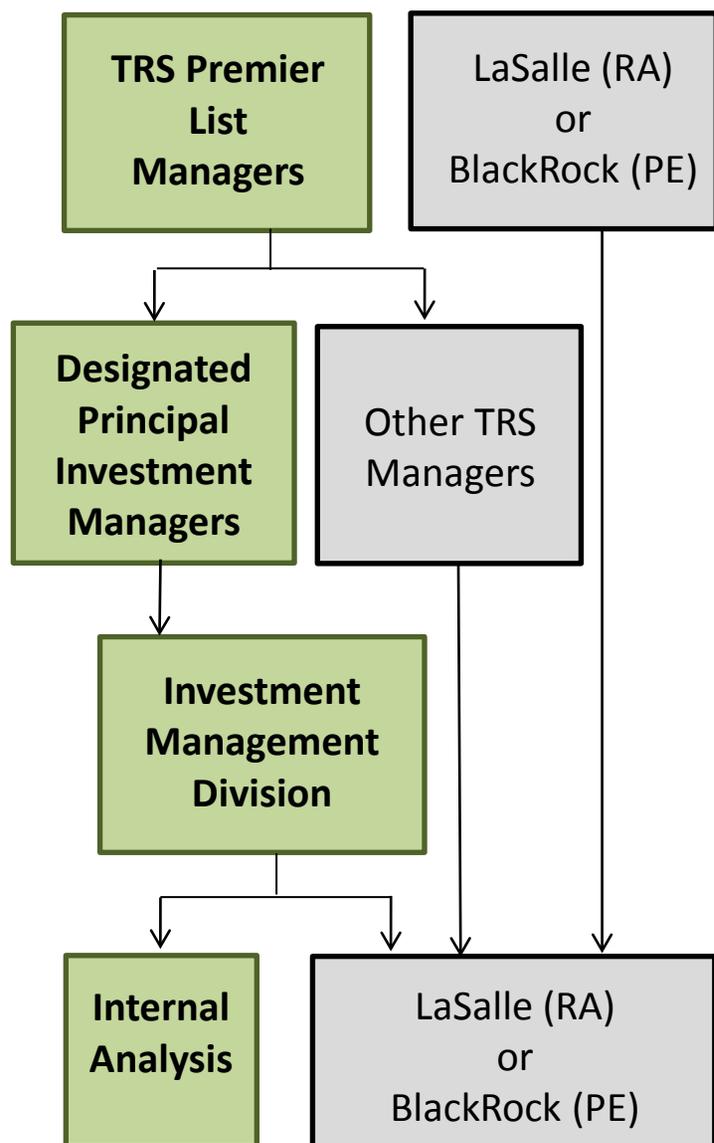
- Time-Weighted Returns (“TWR”) Performance Reporting (Pure View) and Internal Rate of Return (“IRR”) State Street Private Edge show different results for the Private Equity and Real Assets portfolios as of a given reporting date
- Neither is incorrect
- There are 4 main reasons for the difference
 1. Delivery and timing of official market values
 2. Cash adjustments (capital calls and distributions)
 3. Currency reconciliation mismatches
 4. Calculation methodology differences
- IRRs (TPEG) are reported on a lagged basis (90 days) and may vary significantly from the TWR reported in Pure View
- The most appropriate peer comparison, and industry standard, of Private Markets performance are IRRs

Principal Investment Process

What are *direct* investments?



Principal Investment Process



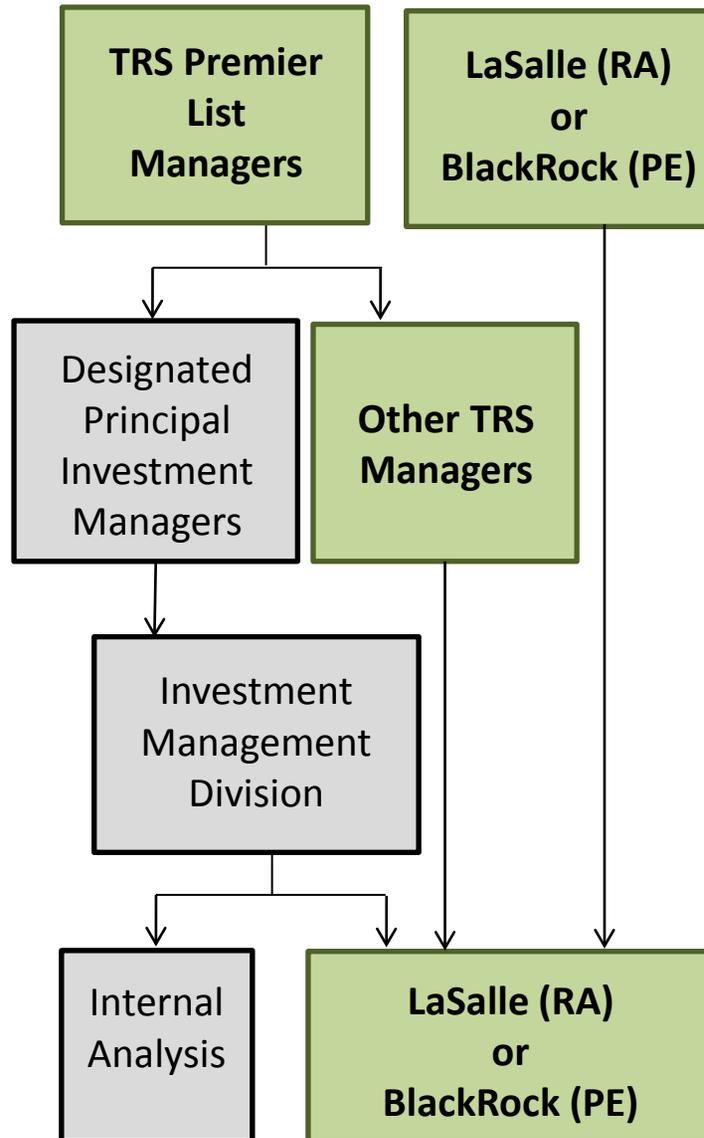
- ❑ Single investment rather than a fund
- ❑ TRS sources Principal Investment opportunities from General Partners
- ❑ Opportunities from designated managers are evaluated internally by TRS Principal Investments team
- ❑ Diligence assistance provided by advisors: LaSalle (RA) and BlackRock (PE)
- ❑ Must be approved by Internal Investment Committee (IIC)
- ❑ Current investments generally between \$50-250 million
- ❑ Investments monitored and managed as part of underlying RA or PE portfolio

Principal Investment Process

What are *indirect* investments?



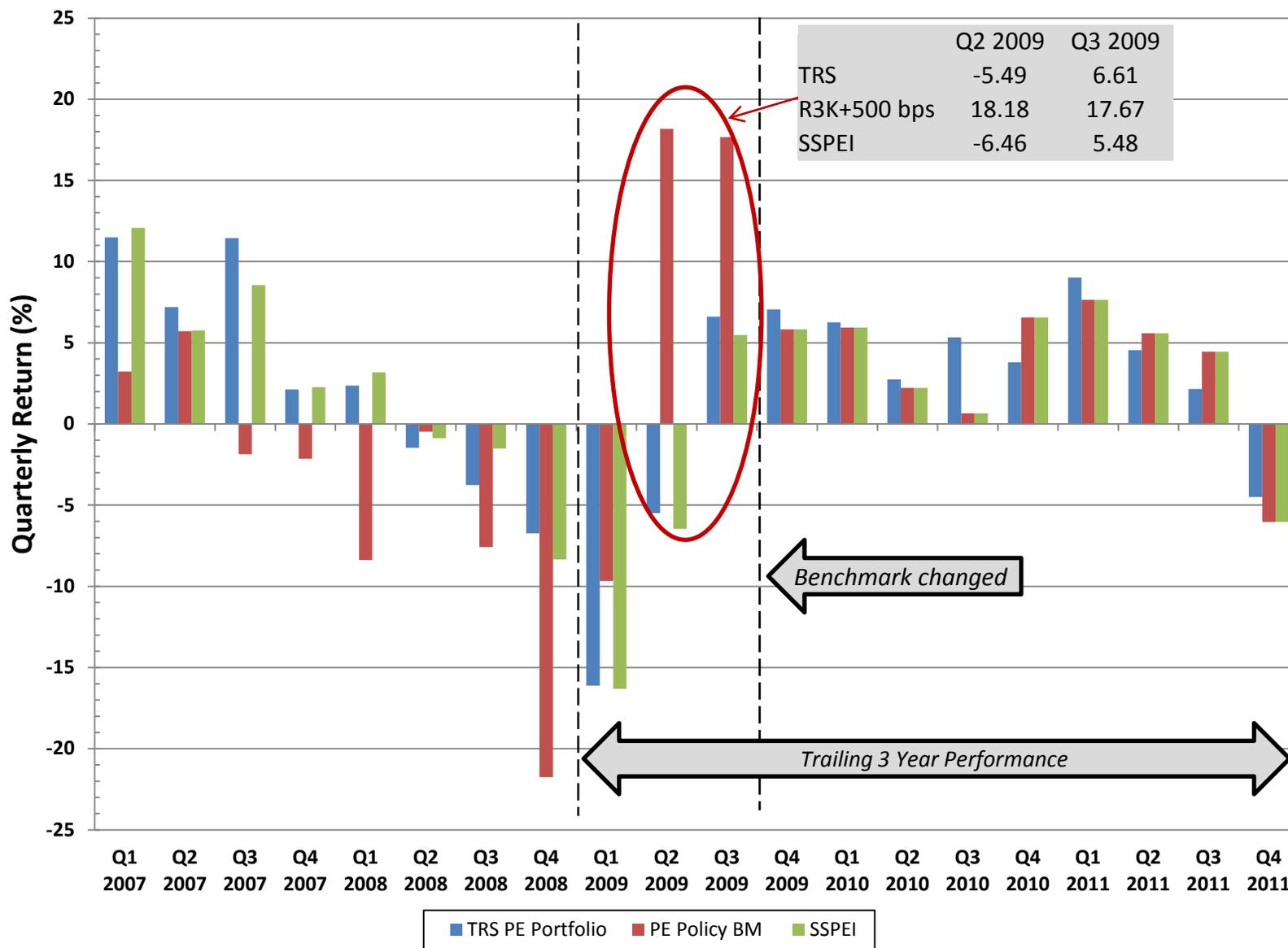
Principal Investment Process



- ❑ BlackRock (PE) or LaSalle (RA) source Principal Investments or have them referred by TRS
- ❑ Diligence on the opportunity is completed by the investment manager
- ❑ Deal must be approved by investment committee of BlackRock or LaSalle
- ❑ Current investments are generally between \$10-\$40 million
- ❑ Portfolio construction is a continual process, led by LaSalle (RA) and BlackRock (PE)
- ❑ TRS monitors and reviews completed transactions and overall Fund performance

Private Equity Benchmarking

Effect of Legacy Benchmark on Performance

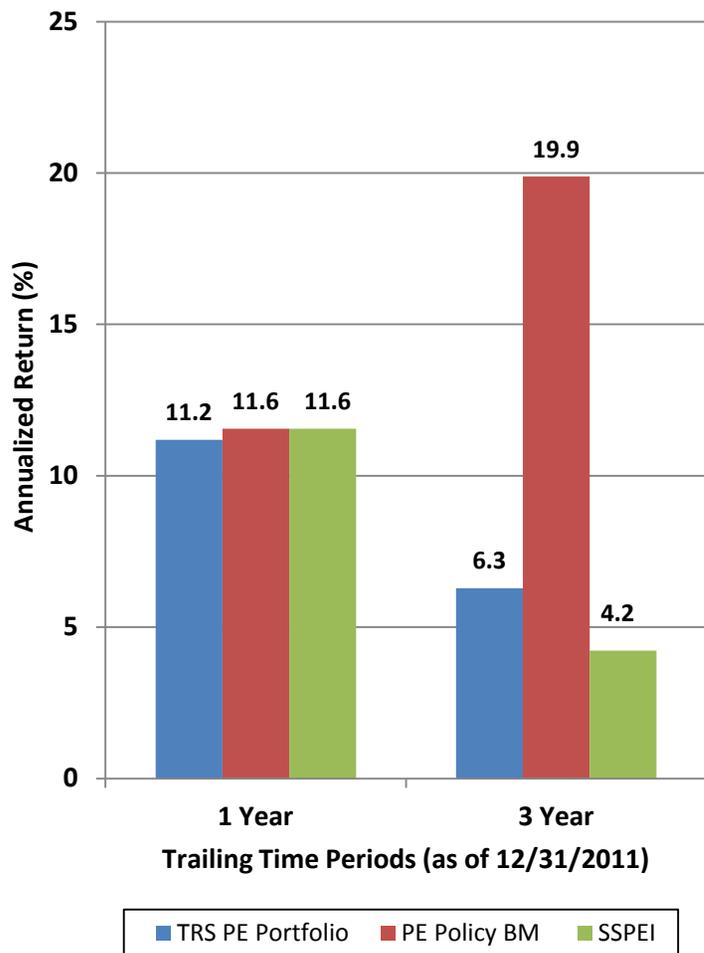


Private Equity Benchmarking

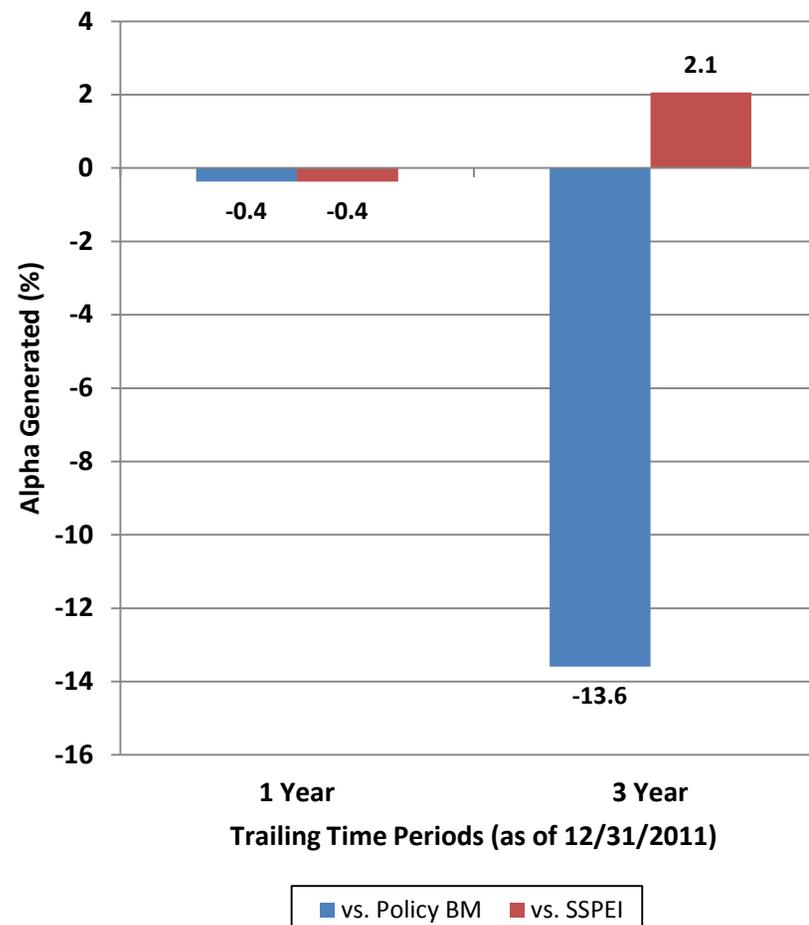
Effect of Legacy Benchmark on Performance



Portfolio Performance vs. Benchmark



Alpha Generation



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Private Equity

Richard Hall
Managing Director

Executive Summary



PERFORMANCE				
Asset Class	Assets (millions)	1-Year	3-Year	ITD ¹
Private Equity	\$12,465	6.4%	14.3%	11.0%
State Street PE Index ²		6.3%	11.5%	11.8%
Private Equity Policy Benchmark ³		6.3%	25.1%	6.4%
TUCS Peer Comparison		62 nd	17 th	--

ASSET GROWTH			
PE (millions)	1 Year	3 Year	5 Year
Starting Value	\$9,820	\$5,538	\$2,020
Net Capital Invested	\$2,001	\$3,556	\$7,436
Investment Return	\$644	\$3,371	\$3,009
Ending Value	\$12,465	\$12,465	\$12,465

LONG TERM RETURN AND RISK EXPECTATIONS					
Portfolio	Portfolio Weight	Current Weight	Strategic Goal	Expected Return	Estimated Volatility ⁴
Large Buyout	40%	49%	Equity Alpha	12%	17.9%
Small / Mid Buyout	35%	32%	Equity Alpha	16%	20.8%
Venture / Growth Equity	14%	6%	Equity Alpha	16%	26.5%
Credit / Special Situations	11%	16%	Diversification	12%	20.0%
PRIVATE EQUITY TOTAL	100%	100%	Equity Alpha / Diversification	14%	24.7%

ALLOCATION SUMMARY						
Strategy	% of Portfolio			% of Total Trust		
	3/31/2012	3/31/2011	Change	3/31/2012	3/31/2011	Change
Domestic Buyouts	54.0%	57.6%	-3.6%	6.1%	5.2%	0.9%
International Buyouts	23.8%	26.6%	-2.8%	2.7%	2.4%	0.3%
Total Venture / Growth Equity	5.5%	4.7%	0.8%	0.6%	0.4%	0.2%
Credit / Special Situations	12.7%	7.2%	5.5%	1.4%	0.7%	0.8%
Emerging Markets	0.7%	0.5%	0.2%	0.1%	0.0%	0.0%
Emerging Managers	3.2%	3.3%	-0.1%	0.4%	0.3%	0.1%
PRIVATE EQUITY TOTAL	100.0%	100.0%	-	11.3%	9.0%	2.3%

¹ 12/31/2011 Since Inception IRR per State Street Private Edge Group

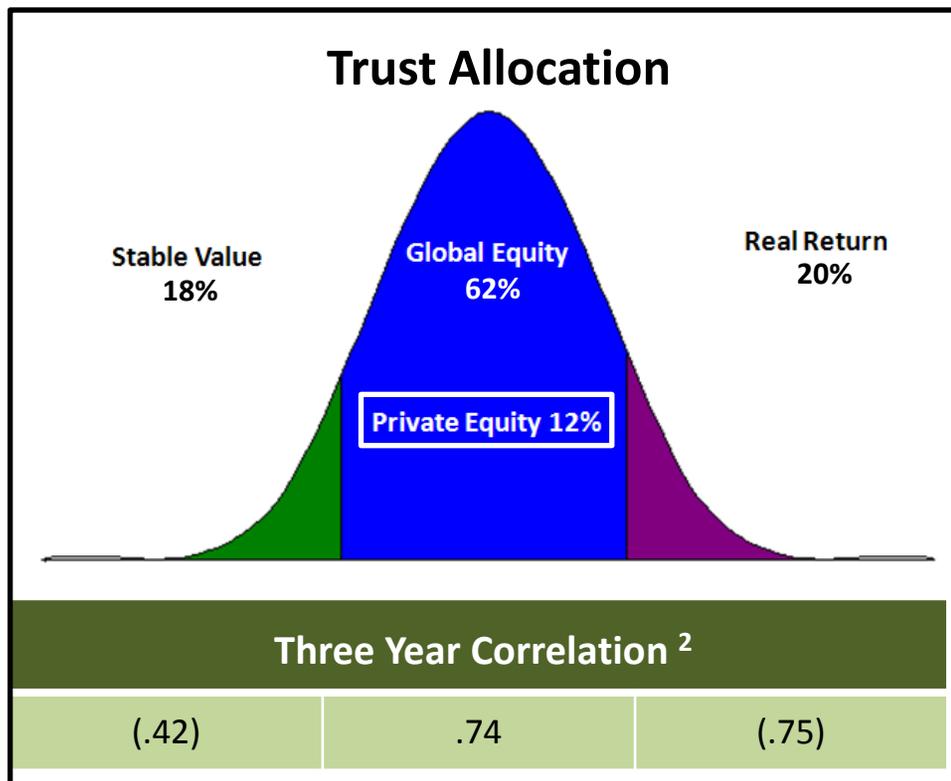
² Quarter Lag

³ PE Policy Benchmark is Russell 3000 + 500 bps through September 30, 2009 and the State Street Private Equity Index thereafter

⁴ Source: Hamilton Lane

Role in the TRS Trust

Period ending March 31, 2012



PRIVATE EQUITY				
Portfolio Target	Portfolio Weight	Expected Return	Volatility	
			Expected ¹	Observed ²
Large Buyout	40%	12%	17.9%	10.1%
Mid/ Small Buyout	35%	16%	20.8%	11.0%
Venture/ Growth Equity	14%	16%	26.5%	5.1%
Credit / Special Situations	11%	12%	20.0%	14.5%
PE Total	100%	14%	24.7%	8.8%
Performance	Return	SSPEI Benchmark	Policy Benchmark ³	TUCS Rank
1 Year	6.4%	6.3%	6.3%	62nd
3 Years	14.3%	11.5%	25.1%	17th
5 Years	6.7%	7.0%	3.4%	26th
ITD	11.0%	11.8%	7.3%	--
Drawdown Risk ⁴	Drawdown			
S&P 500	45.8%			
Russell 2000	47.9%			
TRS Private Equity	29.9%			

¹ Source: Hamilton Lane

² Three years ending March 31, 2012

³ PE Policy Benchmark is Russell 3000 + 500 bps through September 30, 2009 and the State Street Private Equity Index thereafter

⁴ 12/31/2011 Since Inception IRR per State Street Private Edge Group



Organization Structure

Private Equity

Richard Hall

Managing Director *(BA Harvard, MBA Northwestern)*

Dedicated Team

Allen MacDonell – Sr. Investment Manager *(BBA Georgia, MBA Georgia State, CFA)*

Scott Ramsower – Senior Associate *(BBA Texas A&M)*

Neil Randall – Director *(BBA, MS Texas A&M)*

Brad Thawley – Investment Manager *(BBA Bucknell)*

Courtney Villalta – Sr. Investment Manager *(BBA St. Edwards)*

Shared - Analysts

Andy Cronin – Analyst *(BBA Texas A&M)*

Chase Hill – Sr. Analyst *(BBA Georgia, MBA UT)*

Molly Rose – Analyst *(BBA Texas State)*

Ross Willmann – Sr. Analyst *(BBA Texas A&M)*

Principal Investments

Michael Lazorik – Sr. Investment Manager *(BBA UT)*

Kamal Maruf – Blackrock Associate *(BS UNC, MBA Wharton, CPA)*

Shared – Team Support

Melissa Kleihege – Deal Flow Analyst *(BS Texas A&M)*

Gracie Marsh – Admin Assistant *(BA U of Cal Davis)*

Cynthia Mendoza – Admin Assistant *(BBA St. Mary's)*

Consulting Support

Hamilton Lane

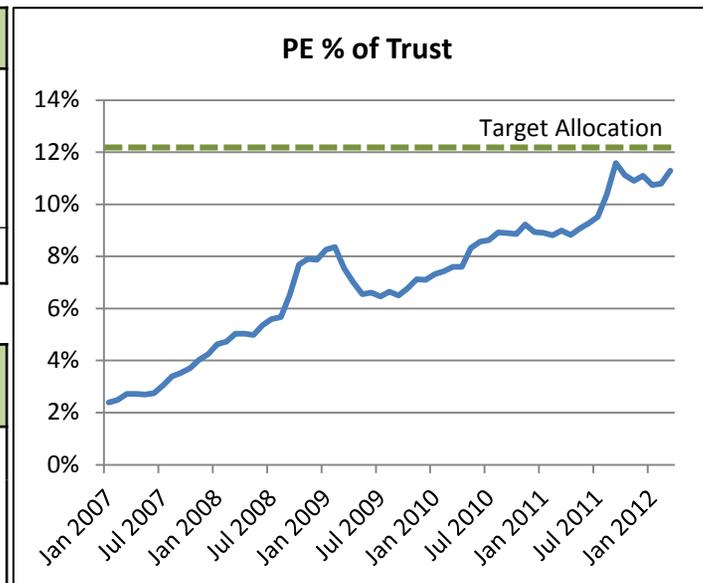
BlackRock

Asset Growth, Allocation and Returns

Period Ending March 31, 2012



Growth (millions)	1 Year	3 Years	5 Years
Starting Value	\$9,820	\$5,538	\$2,020
Net Capital Invested	\$2,001	\$3,556	\$7,436
Investment Return	\$644	\$3,371	\$3,009
Ending Value	\$12,465	\$12,465	\$12,465



Premier List Investments	Total	Invested Last 12 Months	Invested Last 36 Months
Number of Premier Managers	29	8	23
Percent Invested in Funds	--	69%	73%
Percent invested in Principal Investments	--	31%	27%

Strategy	Allocation			Investment Returns			Inception Date ²
	2012	2009	2007	1 Year	3 Years	ITD ¹	
Domestic Buyout	54%	54%	50%	8.3%	13.5%	12.7%	2000
International Buyout	24%	20%	20%	0.8%	15.0%	9.1%	2001
Venture / Growth Equity	5%	6%	9%	10.2%	9.9%	5.0%	2001
Credit / Special Situations	13%	17%	19%	7.1%	24.9%	10.5%	2005
Emerging Markets	1%	0%	0%	-2.3%	--	-8.0%	2009
Emerging Managers	3%	3%	2%	9.2%	6.4%	4.6%	2005
PE Total	100%	100%	100%	6.4%	14.3%	11.0%	

¹12/31/11 Since Inception IRR per State Street Private Edge Group

²Excludes legacy portfolio commitments to Texas Growth Funds and Goldman Sachs Vintage Fund made prior to 2000

Update from 2011 Report



2011 Goals	Actual	Explanation																																								
Commit up to \$1.5 Billion	<ul style="list-style-type: none"> IIC Approved \$1.9 billion of commitments Funds expected to begin investing in 2011-2012 	<table border="1"> <thead> <tr> <th></th> <th>Committed (millions)</th> <th>Funds</th> <th>Principal</th> <th>Expected Return (net)</th> </tr> </thead> <tbody> <tr> <td>Large Buyout</td> <td>\$342</td> <td>0</td> <td>4</td> <td>18%</td> </tr> <tr> <td>Small/Mid Buyout</td> <td>\$541</td> <td>2</td> <td>1</td> <td>20%</td> </tr> <tr> <td>Venture/ Growth Equity</td> <td>\$34</td> <td>1</td> <td>0</td> <td>20%</td> </tr> <tr> <td>Credit / Special Situations</td> <td>\$675</td> <td>3</td> <td>0</td> <td>14%</td> </tr> <tr> <td>Emerging Markets</td> <td>\$250</td> <td>1</td> <td>0</td> <td>25%</td> </tr> <tr> <td>Emerging Managers</td> <td>\$60</td> <td>4</td> <td>0</td> <td>18%</td> </tr> <tr> <td>TOTAL</td> <td>\$1,902</td> <td>11</td> <td>5</td> <td></td> </tr> </tbody> </table>		Committed (millions)	Funds	Principal	Expected Return (net)	Large Buyout	\$342	0	4	18%	Small/Mid Buyout	\$541	2	1	20%	Venture/ Growth Equity	\$34	1	0	20%	Credit / Special Situations	\$675	3	0	14%	Emerging Markets	\$250	1	0	25%	Emerging Managers	\$60	4	0	18%	TOTAL	\$1,902	11	5	
	Committed (millions)	Funds	Principal	Expected Return (net)																																						
Large Buyout	\$342	0	4	18%																																						
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Emerging Markets	\$250	1	0	25%																																						
Emerging Managers	\$60	4	0	18%																																						
TOTAL	\$1,902	11	5																																							
Complete Five-Year Transition to Target Allocation	Completed at 12% of Trust	<ul style="list-style-type: none"> Higher long-term returns ITD returns: 11.0% Net¹ 																																								
Develop Strategic Partnership Network	Selected Apollo and KKR	<ul style="list-style-type: none"> Higher Target Return (including Real Assets) Anticipated \$2.0 billion in Private Equity and up to \$2.0 billion in opportunistic investments over 5 years 																																								
Implement Phase II of Emerging Managers Program	Selected Hewitt Ennis Knupp as advisor	<ul style="list-style-type: none"> Approved \$105 million in commitments to 7 funds in Phase II \$855 million approved commitments to PE Emerging Managers 																																								
Streamline/Optimize Premier List	Reduced Premier List to 29 General Partners	<ul style="list-style-type: none"> Allocation to Private Equity now at target level 																																								
Implement Principal Investment Program	<ul style="list-style-type: none"> Committed \$1.6 billion since October 2009 11 Principal Investments and 2 Funds Two realizations at 39% IRR and 141% IRR Long-term target: 20% of PE 	<ul style="list-style-type: none"> Higher long-term returns ITD returns: 9.2% 																																								
Continue to be a thought-leading Limited Partner	<ul style="list-style-type: none"> Limited Partner of the Year ILPA Board Member 	<ul style="list-style-type: none"> Private Equity International (PEI) Award 																																								

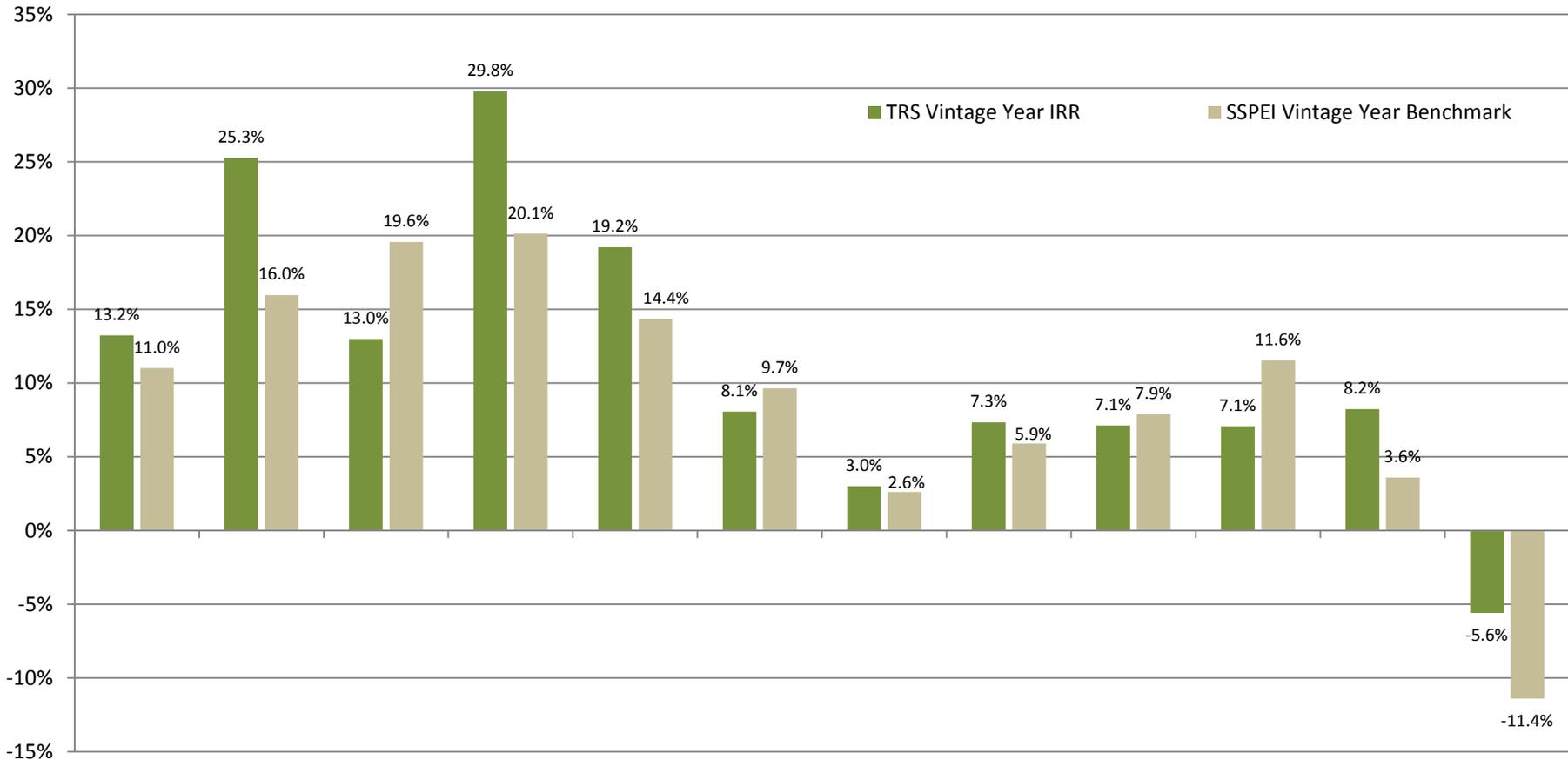
¹ 12/31/11 Since Inception IRR per State Street Private Edge Group

TRS Vintage Year Comparison

As of December 31, 2011



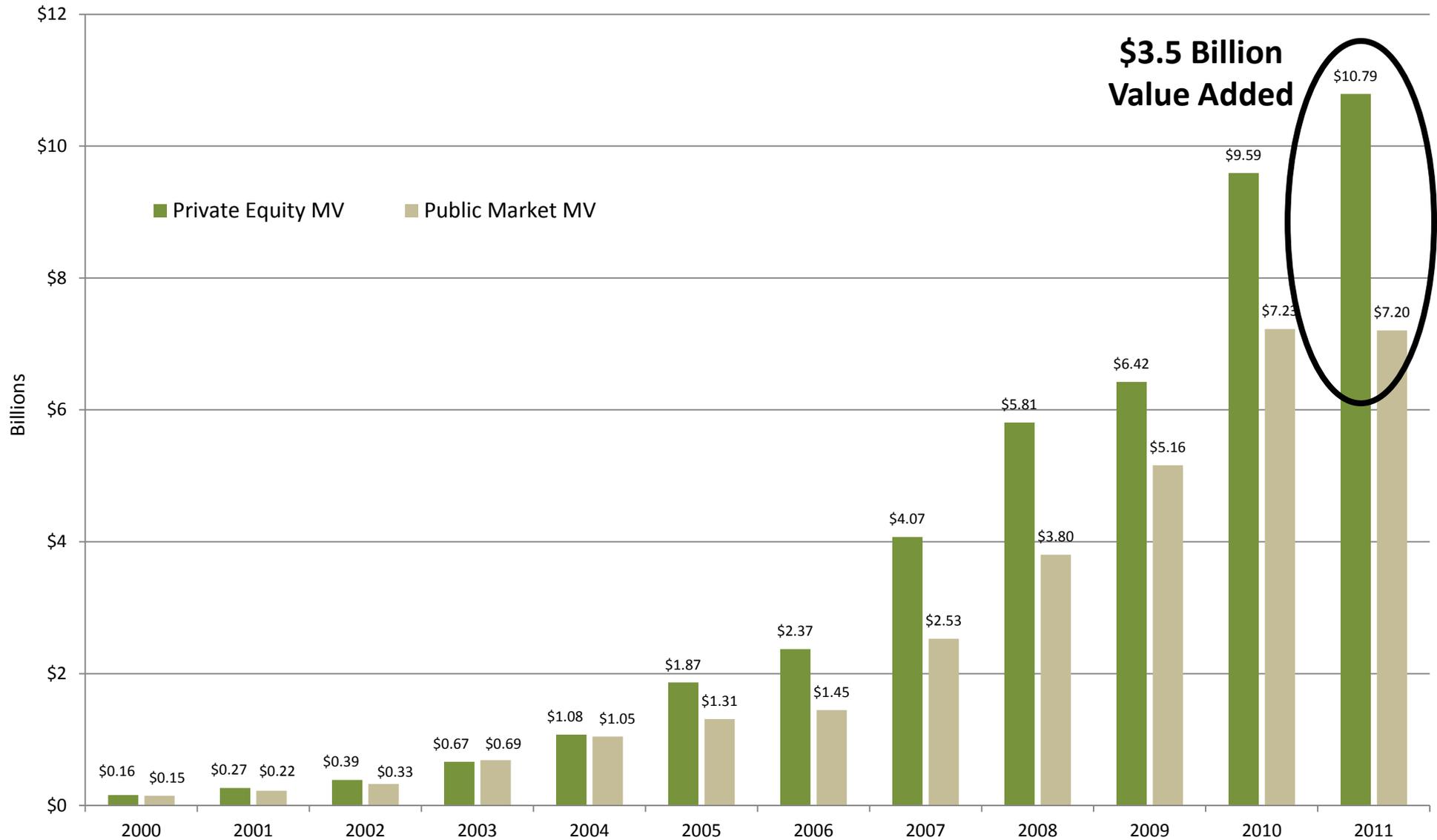
Vintage Year Returns



(\$ in millions)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Committed	\$275	\$862	\$238	\$456	\$595	\$1,050	\$2,666	\$4,372	\$4,262	\$2,827	\$906	\$1,695	\$20,203
Invested	<u>\$262</u>	<u>\$850</u>	<u>\$237</u>	<u>\$432</u>	<u>\$549</u>	<u>\$832</u>	<u>\$2,316</u>	<u>\$3,470</u>	<u>\$2,574</u>	<u>\$1,494</u>	<u>\$340</u>	<u>\$621</u>	<u>\$13,976</u>
Remaining	\$13	\$12	\$1	\$24	\$46	\$218	\$350	\$902	\$1,688	\$1,333	\$566	\$1,074	\$6,227

Private Equity Value Added Over Public Markets

Cumulative as of September 30, 2011



Source: Hamilton Lane

Public Market values calculated by assuming investments were made in the MSCI All World index in the same size and timing as TRS Private Equity cash flows

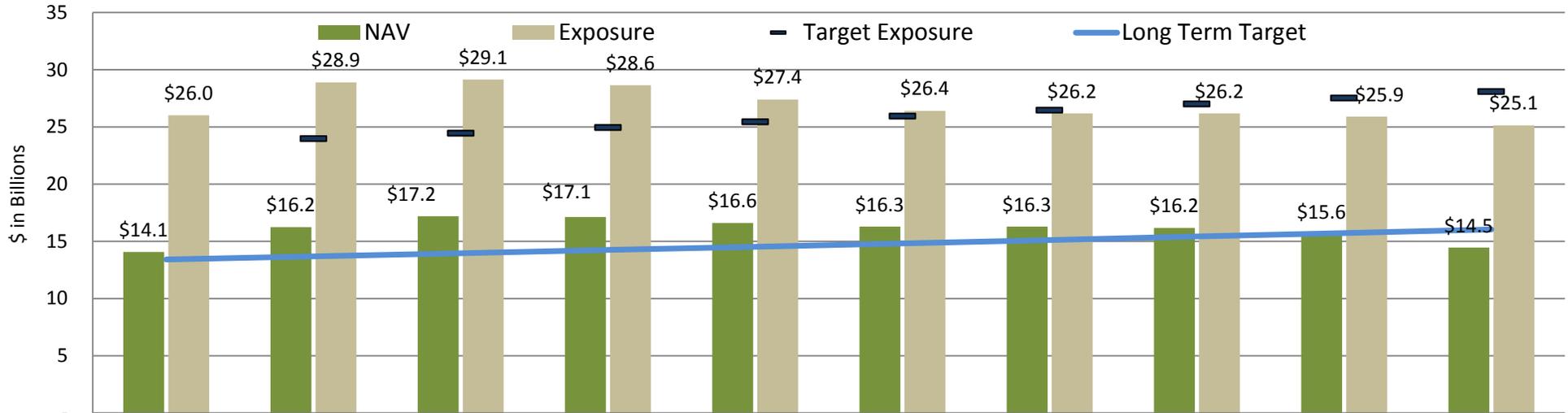


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Long-Term Funding Analysis



Total PE Portfolio NAV and Exposure (2012-2021)



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Capital Plan:	\$3,575	\$3,375	\$1,500	\$1,500	\$1,500	\$1,500	\$1,800	\$1,800	\$2,000	\$2,000
PE % of Trust:	12.6%	14.2%	14.8%	14.4%	13.7%	13.2%	12.9%	12.6%	11.9%	10.3%

Market Conditions



	2011 "Today"	2007 "Peak"	2002 "Pre-Peak"	Long-Term Average	Long-Term Average (Excl. 2006-2007)
Supply of Capital					
Capital Raised (billions)	\$294	\$668	\$136	\$336	\$282
Number of Funds	785	1,435	623	928	844
% of US GDP	1.9%	4.8%	1.3%	2.5%	2.2%
Demand for Capital					
Total Value of PE-Backed Buyouts (billions)	\$210	\$644	\$74	\$226	\$142
Number of Companies	2,598	3,147	717	1,785	1,558
% of Transactions > \$1 billion	31%	35%	14%	23%	21%
Average LBO Size (billions)	\$1.1	\$2.1	\$0.5	\$1.0	\$0.8
Largest LBO (billions)	\$6.3	\$45.0	\$7.1	--	--
Realizations					
Total Value of PE-Backed Exits (billions)	\$332	\$265	\$20	\$126	\$109
Number of Companies	1,303	1,170	205	693	617
Dry Powder					
Total Amount (billions)	\$370	\$439	\$180	\$342	\$327
% of Dollars Invested	176%	68%	243%	211%	244%
Pricing (EV/EBITDA Multiple)					
Sponsor-Backed Buyouts Average	8.8x	9.7x	6.6x	7.9x	7.5x
Strategic Buyers Average	9.7x	9.1x	9.2x	9.2x	9.2x
Russell 3000 ¹	9.7x	11.9x	12.3x	11.5x	11.5x
Debt					
Availability (1=hard to access; 10=easy)	5	10	5	5	5
Typical Pricing	5.1%	8.1%	5.7%	6.1%	5.7%
Average Debt / EBITDA Multiple	4.9x	6.1x	3.9x	4.5x	4.3x
Average % Debt Used in Transactions	58%	67%	60%	60%	59%
Returns					
IRR at Year 5 ²	--	5.9%	24.9%	--	--
IRR at Year 10 ³	--	--	19.6%	--	--

¹ Bloomberg data for EV/EBITDA for the Russell 3000 Index

² The SSPEI pooled average IRR return at 12/31/2011 and 12/31/2006, respectively

³ The SSPEI pooled average IRR return at 12/31/2011



Other Issues

General Partners

- Increasing focus on Premier List Firms
- GPs globalizing and diversifying
- Sovereign Wealth Funds are a new factor
- Continuing to champion ILPA Principles and alignment
- Operational capabilities replacing financial engineering
- Refinancing wall pushed back to 2017

Macro Issues

- Watching Europe and China carefully
- Potential for increased regulation and GP taxation
- Evolving impact of banking reforms
- Global economic conditions

Organization

- Re-aligning with Global Equity Units
- Increasing focus on Principal Investments
- SPN Specific Unit will be created
- May experience resource issues



Summary

- ❑ Private Equity allocation approaching long-term target
- ❑ Historical Results
 - Three-Year on target (14%)
 - Longer-Term below target (11%¹ above Russell 3000 by 9.8% per year)
 - \$3.5 billion of value-add above the Trust's public equity equivalent²
 - Risk and correlations within expectations
- ❑ 2012 projected to be final year of above normal funding
- ❑ Cash requirements very manageable
- ❑ GP relationships strong and increasingly focused
- ❑ Strategic Partners selected and underway
- ❑ Direct investment capabilities rising and results satisfactory
- ❑ New Emerging Manager Program initiated
- ❑ Market conditions: currently neutral

¹12/31/11 Since Inception IRR per State Street Private Edge Group

²Trust public equivalent is MSCI All-Country World Index

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Real Assets

Eric Lang
Managing Director

Executive Summary



PERFORMANCE				
Assets				
Asset Class	(\$millions)	1 Year	3 Year	ITD ¹
Real Assets	\$13,970	12.8%	11.9%	1.3%
Private Real Assets Benchmark		15.0%	1.0%	2.2%
TUCS Peer Comparison		37th	18th	

ASSET GROWTH			
Real Assets (millions)	1 Year	3 Year	5 Year
Starting Value	\$10,500	\$4,582	\$ 747
Net Capital Invested	\$ 1,967	\$6,153	\$11,975
Investment Return	\$1,503	\$3,235	\$ 1,248
Ending Value	\$13,970	\$13,970	\$13,970

LONG TERM RETURN AND RISK EXPECTATIONS				
Strategy	Portfolio Weight	Strategic Goal	Expected Return	Estimated Volatility ⁴
Core	25%	Diversification/Beta	8.0%	8.0%
Value-Add	10%	Return Enhancement	9.8%	12.0%
Opportunistic	25%	Return Enhancement	12.8%	20.0%
Real Assets Special Situations (RASS)	15%	Relative Value	8.9%	17.4%
Other Real Assets	25%	Inflation Protection	11.8%	15.7%
REAL ASSETS TOTAL	100%	Diversification/Inflation Protection	10.3%	11.1%

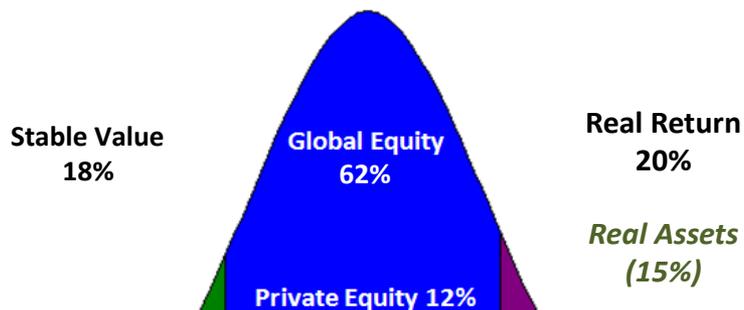
ALLOCATION SUMMARY						
Strategy	% of Portfolio			% of Total Trust		
	<u>3/31/2012</u>	<u>3/31/2011</u>	<u>Change</u>	<u>3/31/2012</u>	<u>3/31/2011</u>	<u>Change</u>
Core	25.5%	26.1%	-0.6%	3.2%	2.4%	0.8%
Value Added	10.5%	10.5%	0.0%	1.3%	1.0%	0.3%
Opportunistic	26.7%	30.3%	-3.5%	3.4%	2.8%	0.6%
Real Assets Special Situations (RASS)	7.3%	0.0%	7.2%	0.9%	0.0%	0.9%
Other Real Assets	13.4%	12.1%	1.4%	1.7%	1.1%	0.6%
Emerging Managers	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%
Private Real Assets	83.7%	79.0%	4.6%	10.6%	7.3%	3.3%
Passive REITs	16.4%	20.9%	-4.6%	2.1%	1.9%	0.2%
REAL ASSETS TOTAL	100.0%	100.0%	-	12.7%	9.2%	3.5%

Role in the TRS Trust

Periods ending March 31, 2012



Trust Allocation



Three Year Correlation²

0.36

0.02

(0.34)⁶

REAL ASSETS				
Portfolio Target	Portfolio Weight	Expected Return ¹	Volatility	
			Expected ¹	Observed ²
Core	25%	8.0%	8.0%	9.2%
Value Added	10%	9.8%	12.0%	19.7%
Opportunistic	25%	12.8%	20.0%	17.3%
RASS	15%	8.9%	17.4%	n/a
Other Real Assets	25%	11.8%	15.7%	7.4%
Emerging Managers ³	0%	n/a	n/a	n/a
Private Real Assets Total	100%	10.3%	11.1%	10.4%
REITS (Passive) ⁴	0%	8.9%	20.4%	29.7%
Real Assets Total	100%	10.3%	11.1%	12.7%
Realized Returns (with REITS)		Return	Benchmark	
1 Year		12.8%	15.0%	
3 Years		11.9%	1.0%	
Drawdown Risk ⁵		Drawdown		
S&P 500		45.8%		
REITS (MSCI US REITs)		66.4%		
TRS Real Assets		41.5%		

¹ Source: Townsend

² Three years ended March 31, 2012

³ Current allocation to Emerging Managers is quite small (<1.0%)
Allocation to Emerging Managers is diversified across all strategies so returns and volatilities will vary

⁴ Passive REITS are used as a real asset proxy until the real asset portfolio reaches policy allocation

⁵ Five years ending March 31, 2012

⁶ Vs TIPS



Organization Structure

Real Assets

Eric Lang

Managing Director (BBA UT, MBA UH)

Dedicated Team

- Brian Baumhover – Sr. Associate (BS Iowa State, MBA UT)
- Michael Pia – Sr. Investment Manager (BS US Naval Academy, MS U of W. Florida, MBA TCU, CFA, CAIA)
- John Ritter – Director (BBA, MBA, JD UT, CFA)
- Craig Rochette – Investment Manager (BS Arizona, CFA, CAIA)
- Grant Walker – Sr. Investment Manager (BBA Baylor, MBA St. Edwards)
- Jennifer Wenzel – Investment Manager (BBA UT)
- Nathan Zinn – Investment Manager (BA, MBA Northwestern)

Shared - Analysts

- Andy Cronin – Analyst (BBA Texas A&M)
- Chase Hill – Sr. Analyst (BBA U of Georgia, MBA UT)
- Molly Rose – Analyst (BBA Texas State)
- Ross Willmann – Sr. Analyst (BBA Texas A&M)

Shared - Team Support

- Melissa Kleihege – Deal Flow Analyst (BS Texas A&M)
- Gracie Marsh – Admin Assistant (BA U of Cal Davis)
- Cynthia Mendoza – Admin Assistant (BBA St. Mary's U)

Consulting Support

LaSalle

Townsend

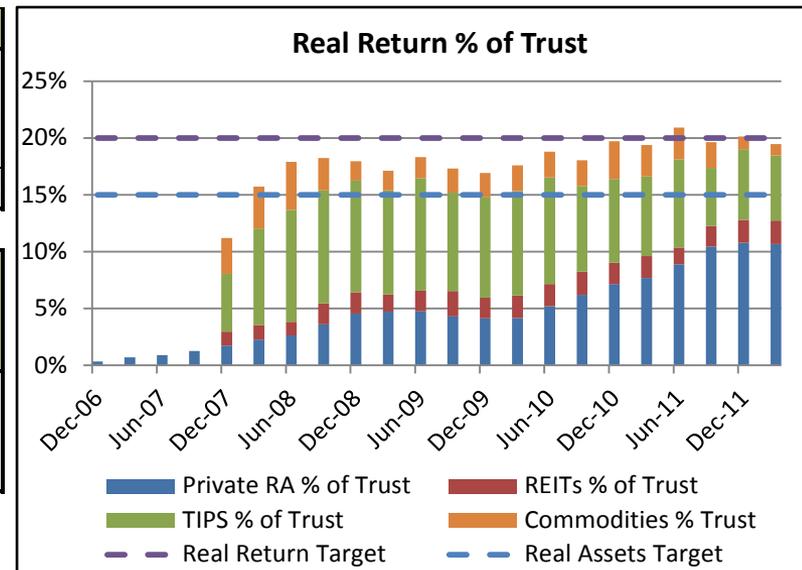
Asset Growth, Allocation and Returns

Period Ending March 31, 2012



Growth (\$ millions)	1 Year	3 Years	5 Years
Starting Value	\$10,500	\$4,582	\$747
Net Capital Invested	\$1,967	\$6,153	\$11,975
Investment Return	\$1,503	\$3,235	\$1,248
Ending Value	\$13,970	\$13,970	\$13,970

Premier List Managers	Total	Invested Last 12 months	Invested Last 24 months
Number of Premier Managers	41	14	25
% of Capital Invested in Funds	83%	84%	71%
% of Capital Invested in Principal Investments	17%	16%	29%



Strategy	TRS Leverage	Typical Leverage	Allocation			Investment Returns			Inception Date
			2012	2009	2007	1 Year	3 Years	ITD ¹	
Core	34.5%	35%- 50%	26%	27%	14%	17.2%	7.2%	5.2%	2006
Value Added	62.0%	50%-65%	11%	10%	17%	18.7%	-10.9%	-7.3%	2006
Opportunistic	50.9%	65%-80%	27%	23%	24%	6.7%	-2.2%	-4.6%	2006
RASS	8.7%	Varies	7%	0%	0%	18.8%	n/a	21.4%	2010
Other Real Assets	34.0%	< 70%	13%	9%	5%	7.7%	0.7%	-2.8%	2007
Emerging Managers	n/a	70%	0%	0%	0%	n/a	n/a	-4.7%	2011
Private Real Assets	44.2%		84%	69%	60%	12.2%	1.1%	-0.6%	2006
Passive REITs	n/a		16%	31%	40%	13.1%	41.7%	-0.6%	2007
Real Assets Total	n/a		100%	100%	100%	12.8%	11.9%	1.3%	2006



Update from 2011 Report

2011 Goals	Actual	Explanation				
		Approved Commitments	Funds	Principal Investments	Expected Return (Net)	
Commit up to \$3.2 Billion	Committed \$3.0 Billion	Core	\$125	1	0	7.30%
		Value Added	\$320	1	2	12%-14%
		Opportunistic	\$1,225	5	2	13.5%-20%
		RASS	\$200	1	0	10%
		Other Real Assets	\$1,000	1	1	8%-13%
		Emerging Managers	\$125	6	n/a	10%-16%
		Total	\$2,995	15	5	
Complete Five-Year Transition to Target Allocation	Currently at 12.7% of Trust	<ul style="list-style-type: none"> Expect to reach target allocation of 15% by 2014 				
Develop Strategic Partnership Network	Selected Apollo and KKR	<ul style="list-style-type: none"> Higher long-term returns (including Private Equity) Anticipate \$1.3 Billion to Real Assets over five years 				
Implement Phase II of Emerging Managers Program	Selected Townsend	<ul style="list-style-type: none"> Committed \$125 Million to 6 funds 				
Streamline/Optimize Premier List	Reduced Premier List to 41 managers from 63 managers	<ul style="list-style-type: none"> Allocation to Real Assets now at Stable Level 				
Implement Principal Investment Program	Invested \$2.2 Billion to date: <ul style="list-style-type: none"> 15 Principal Investments to Date 2 Funds with LaSalle 	<ul style="list-style-type: none"> Higher net long-term returns 22.5% IRR since inception 				
Continue to be a thought-leading Limited Partner	PERE LP of the Year in 2009 & 2010 PREA Board Member ULI Board Member	<ul style="list-style-type: none"> Involved in leading associations REIS Plan Council Member PREA KOZA Fellow 				
Enhance Real Assets Special Situations (RASS) Portfolio	Allocated select existing investments Approved long/short REIT Strategy	<ul style="list-style-type: none"> RASS 1-year return is 18.8% 				

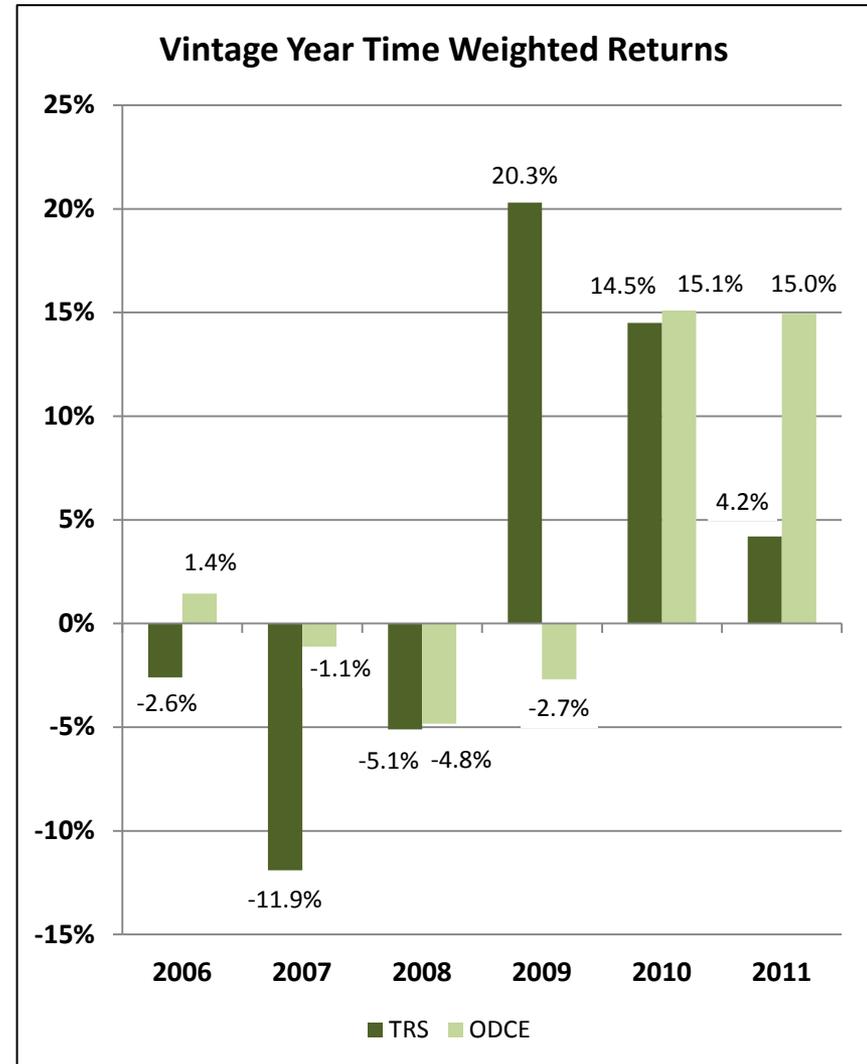


TRS Vintage Year Comparison

As of December 31, 2011

TRS Real Assets Vintage Year Cycle ¹						
Year	Committed	Invested	Remaining	Vintage Year IRR (ITD) ²	Vintage Year TWR (ITD) ²	ODCE TWR ²
2006	\$1,403	\$1,353	\$51	-5.8%	-2.6%	1.4%
2007	\$3,086	\$2,710	\$376	-7.0%	-11.9%	-1.1%
2008	\$4,019	\$3,067	\$953	0.7%	-5.1%	-4.8%
2009	\$2,976	\$2,088	\$888	20.6%	20.3%	-2.7%
2010	\$5,957	\$2,929	\$3,028	15.7%	14.5%	15.1%
2011	\$1,312	\$307	\$1,005	2.2%	4.2%	15.0%

Real Asset investments made post Global Financial Crisis (2009-2011) have performed very well



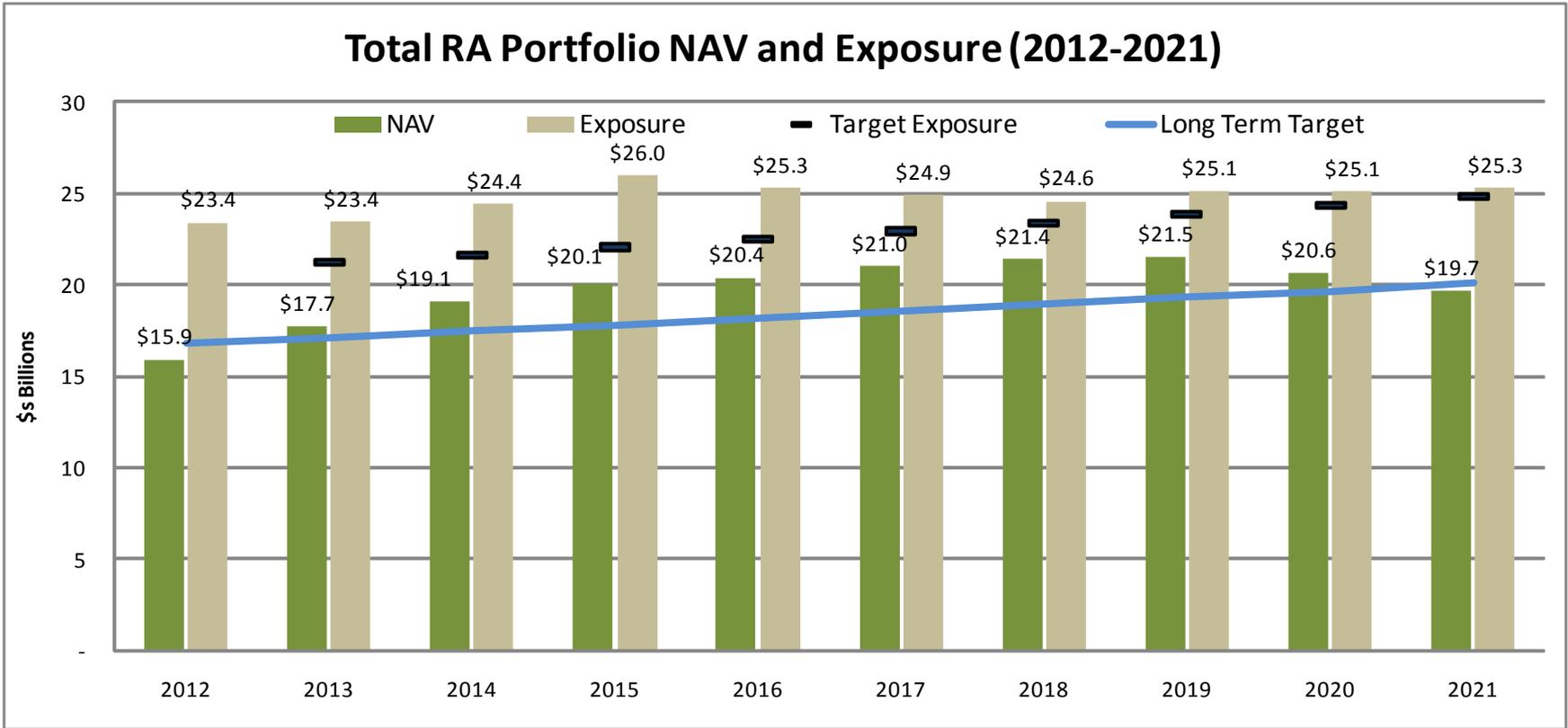
¹ Investments closed during each calendar year

² As of 12/31/2011



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Long-Term Funding Analysis



Capital Plan:	\$2,515	\$1,150	\$1,358	\$2,459	\$755	\$750	\$550	\$1,165	\$1,515	\$2,080
RA % of Trust:	14.2%	15.6%	16.5%	17.0%	17.0%	17.1%	17.1%	16.8%	15.8%	14.7%



Market Conditions (Domestic Only)

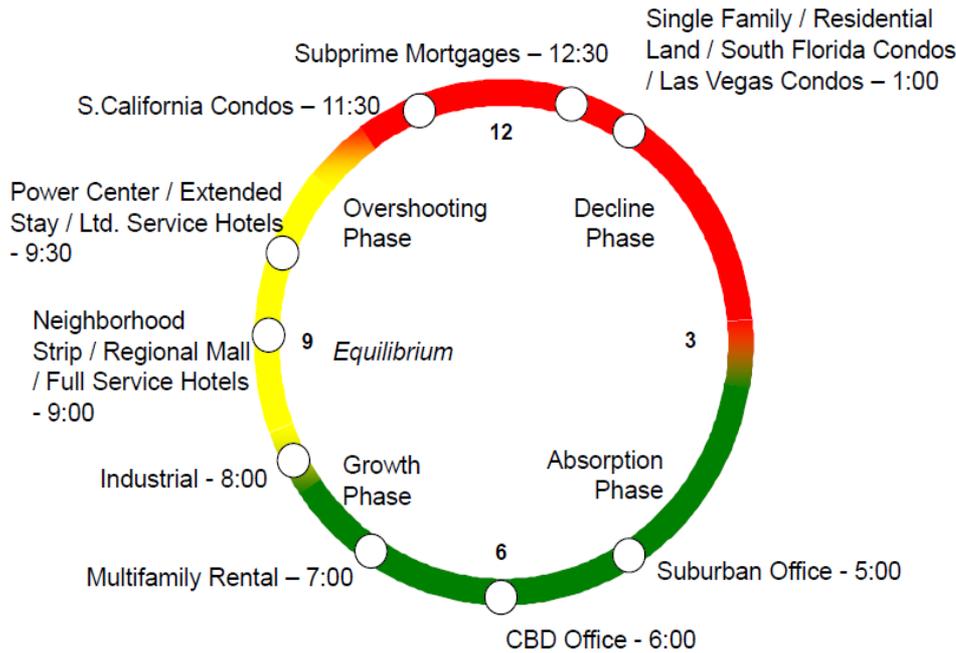
	2011 ("Today")	2007 ("Peak")	2002 ("Pre-Peak")	10 year Average
Capital Flows (billions)				
Total Net Capital Flows	\$31.0	\$316.0	\$147.0	\$163.3
REIT Capital Offerings	\$51.2	\$36.0	\$19.7	\$34.2
Fund Dollars Raised	\$42.6	\$94.6	\$18.6	n/a
Number of Funds	596	396	155	n/a
Transactions (billions)				
All Transactions	\$186.0	\$514.1	\$104.2	\$204.4
% of US GDP	1.2%	3.7%	1.0%	n/a
Fund Transactions (%)	\$37.2 (20%)	\$113.1 (22%)	\$7.3 (7%)	\$26.7 (11%)
Institutional Transactions (%)	\$31.6 (17%)	\$118.2 (23%)	\$18.8 (18%)	\$39.8 (18%)
Private Transactions (%)	\$61.4 (33%)	\$179.9 (35%)	\$38.6 (37%)	\$80.2 (41%)
Pricing				
Cap Rates	7.0%	6.5%	8.8%	7.5%
Cap Rate Spread to UST	5.0%	2.4%	4.8%	3.7%
Debt (billions)				
CMBS Issuance	\$33.0	\$229.0	\$52.0	\$86.1
Percent Debt	60-65%	65-85%	65%	65%-70%
Availability (1=hard to access;10= easy)	3	10	5	5
Terms	Tight standards	Covenant light	Tight standards	N/A
Interest Rate	3.0% - 5.0%	4.5% - 6.5%	5.0% - 7.0%	

Market Update

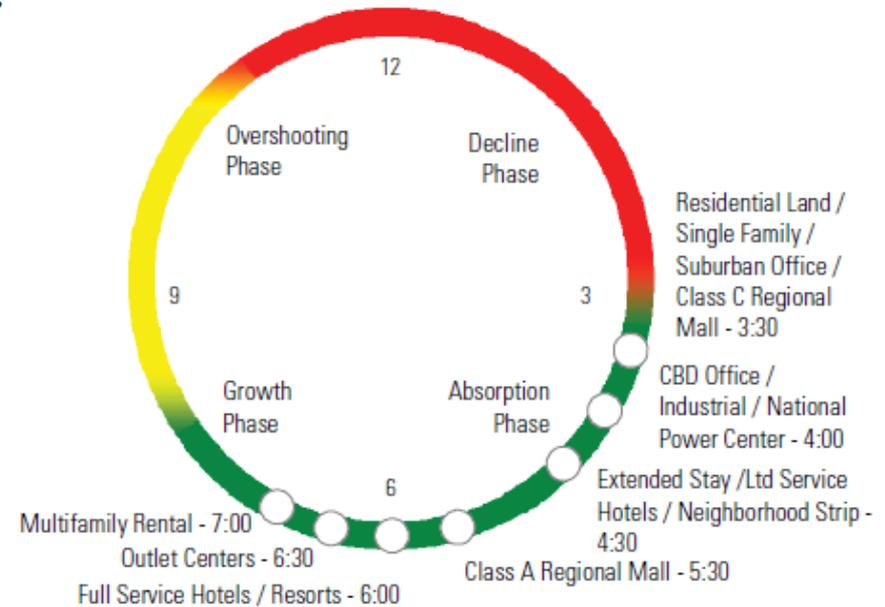
Real Estate Cycle



End of Year 2007



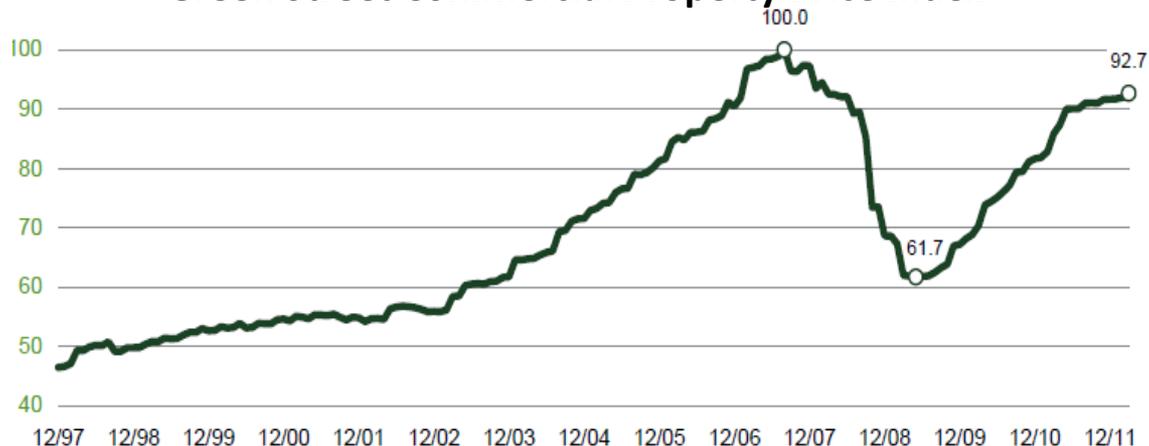
End of Year 2011





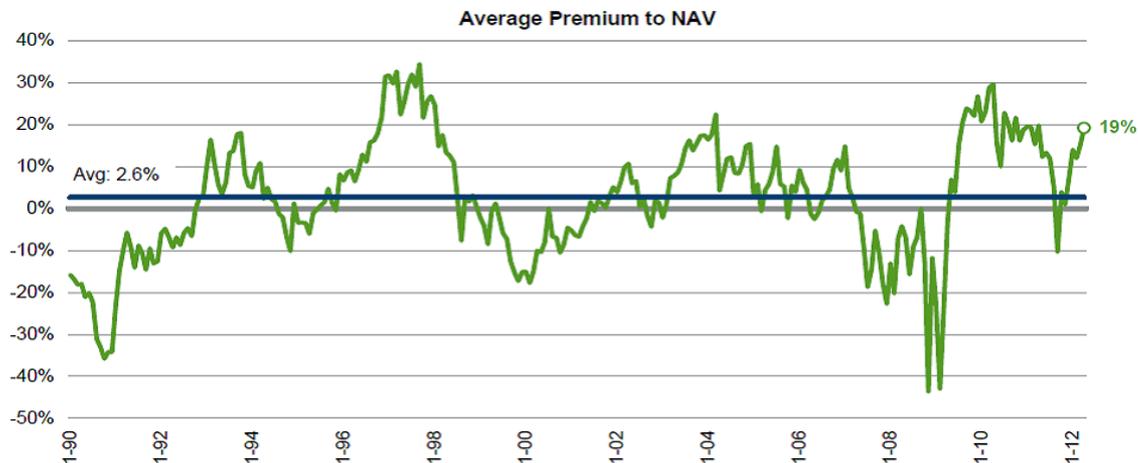
- Commercial property values have recovered significantly off their trough levels

Green Street Commercial Property Price Index



- REIT valuations have been extremely volatile
- They currently trade to a premium of their net asset value

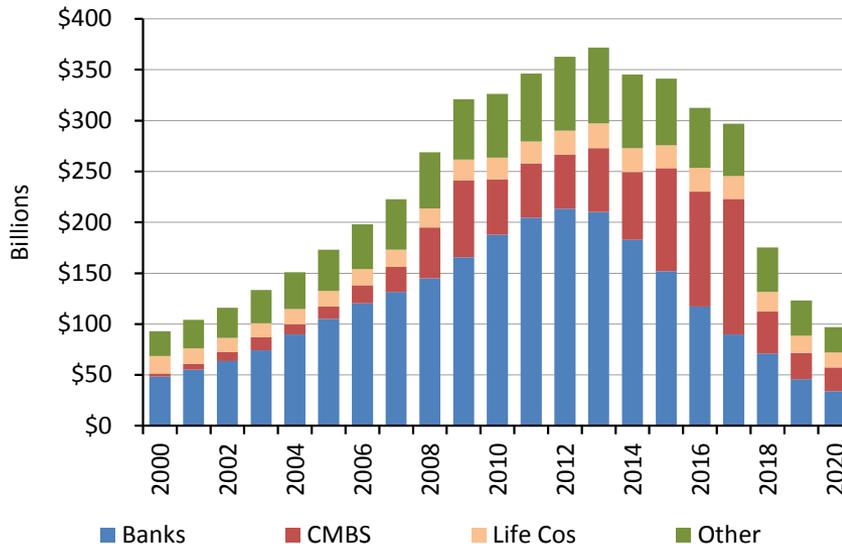
Green Street REIT Valuations



Other Issues

Macro Issues

- Unemployment trends and global economic conditions
- Watching debt roll-over issues carefully



Sources: Foresight Analytics (Data through 2Q 2011)
 Note: Includes multifamily mortgages

General Partners

- Increasing focus on Premier List Firms
- General Partners are having difficulty raising funds
- Sovereign Wealth Funds are a new factor
- Continuing to champion ILPA Principles and Alignment
- PREA standardization efforts

Organization

- Going on our own
- Increasing focus on Principal Investments
- SPN specific unit will be created
- May experience resource issues



Summary

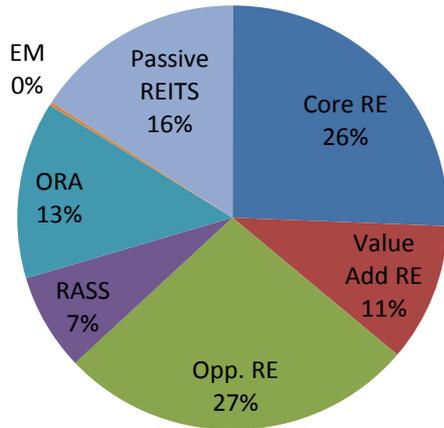
- ❑ Real Asset allocation will reach long-term target (15%) by 2014
- ❑ Historical Results
 - Three-Year on target and above benchmark
 - Public Real Estate outperformed Private
 - Risk and correlations within expectations
- ❑ Funding needs expected to decline
- ❑ General Partner relationships strong and increasingly focused
- ❑ Strategic Partners selected and underway
- ❑ Principal Investment capabilities rising and results satisfactory
- ❑ New Emerging Manager program initiated
- ❑ Markets conditions: neutral to attractive



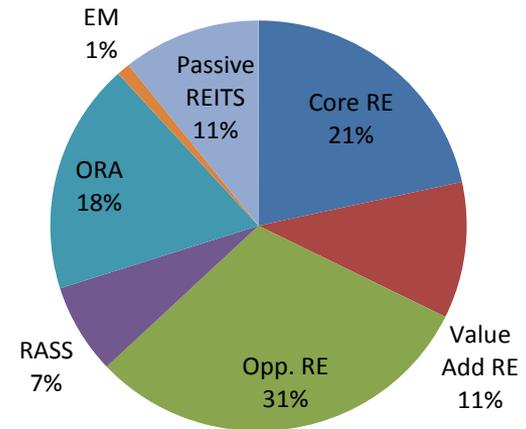
Appendix

Real Assets Portfolio Composition

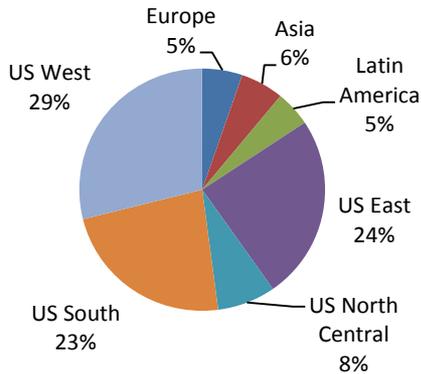
Market Value by Strategy



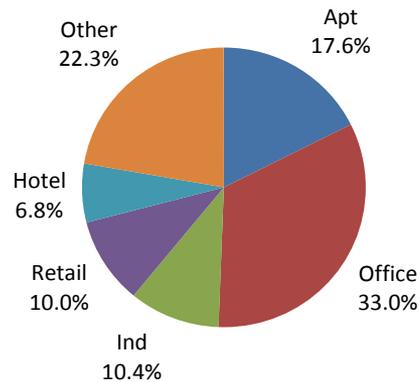
Exposure by Strategy



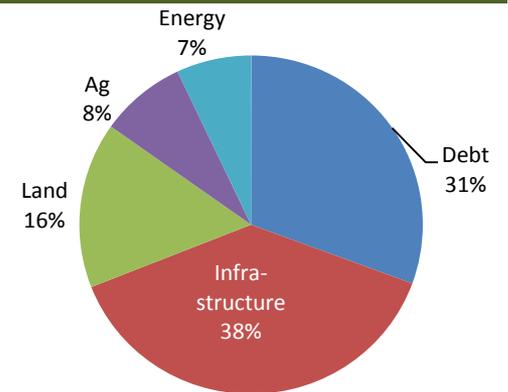
Private Real Estate - Property Type Diversification by Market Value



Private Real Estate - Property Type Diversification by Market Value



Other Real Assets - Diversification by Market Value



Top 10 Relationships

By Exposure (\$ in millions)



Manager	Market Value	Unfunded Commitments	Exposure	% Exposure
1) Blackstone Group	\$741	\$488	\$1,229	6%
2) Principal Real Estate Investors	\$700	\$525	\$1,225	6%
3) Kohlberg Kravis Roberts & Co.	\$179	\$798	\$976	5%
4) Prudential Realty Advisors	\$922	\$21	\$943	5%
5) LaSalle	\$364	\$453	\$817	4%
6) Stockbridge Capital Group	\$562	\$229	\$791	4%
7) JP Morgan Investment Management	\$603	\$141	\$743	4%
8) USAA Real Estate Company	\$591	\$92	\$683	3%
9) Morgan Stanley	\$373	\$129	\$503	2%
10) Forum Partners	\$230	\$179	\$409	2%
Sub-Total	\$5,266	\$3,054	\$8,319	40%
Remaining Managers	\$6,491	\$3,645	\$10,136	49%
Private Real Assets	\$11,756	\$6,699	\$18,455	89%
Passive REITS	\$2,214	\$0	\$2,214	11%
Real Assets Total	\$13,970	\$6,699	\$20,669	100%



Real Asset Strategy Definitions

☐ Core

- Institutional quality, best-located and best-leased assets in the market in each of the traditional property types (office, multifamily, retail, industrial)
- Leverage limit is 50% loan-to-value (LTV)

☐ Value-Add

- Return-enhancing strategies executed at the property level designed to enhance value through execution of one or more of the following strategies: lease-up, rehabilitation, repositioning
- Typical leverage is 50% to 65% LTV

☐ Opportunistic

- Broad range of risk and return via opportunity funds, specialized investments, and mezzanine debt or equity with the majority of strategies involving some level of development or distress
- Leverage is usually 70% LTV and higher

☐ Real Assets Special Situations

- Publicly traded shares of listed REITs (Real Estate Investment Trusts) and REOCs (real estate operating companies) or other real asset related entities, public or private real asset debt, energy MLPs (Pipelines)

☐ Other Real Assets (ORA)

- Infrastructure, oil and gas, commodities, agricultural real estate, timber, and other opportunistic investments providing value enhancement with relatively low expected volatility